JANUARY 2025

TRIBAL TRANSPORTATION SAFETY PLAN

Prepared by:

KLJ

ENGINEERING, REIMAGINED



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EXECUTIVE SUMMARY

A Tribal Transportation Safety Plan is a community based, shared-disciplinary approach to identify transportation safety issues and potential implementation strategies with the goal of improving transportation safety on Tribal Lands. The FHWA describes them as:

> *"Tribal Transportation Safety Plans are a tool used to identify and address transportation risk factors that have a potential of leading to serious injury or death. Safety Plans also organize the efforts of a variety of entities to more effectively reduce risk and can cover multiple transportation modes (roads, maritime, trails, air travel, and others). Safety plans may lead to implementation of a project or program, renewed efforts in an existing program, or further study of a roadway section (using an engineering study or Road Safety Audit).*
>
> *A Tribal Safety Plan should not be developed with a focus on any one funding source. Instead, a Tribal Safety Plan should demonstrate the safety concerns in a community and the strategies that will be explored to implement the plan. To the greatest extent possible, the concerns demonstrated by a safety plan should be selected based on incident history (data). Data allows funding entities to understand the needs and may even compel the funding of the community's needs. Safety Plans can provide a forum for utilizing data sets that are not otherwise considered by funding agencies such as public testimony when formal crash data does not exist."*

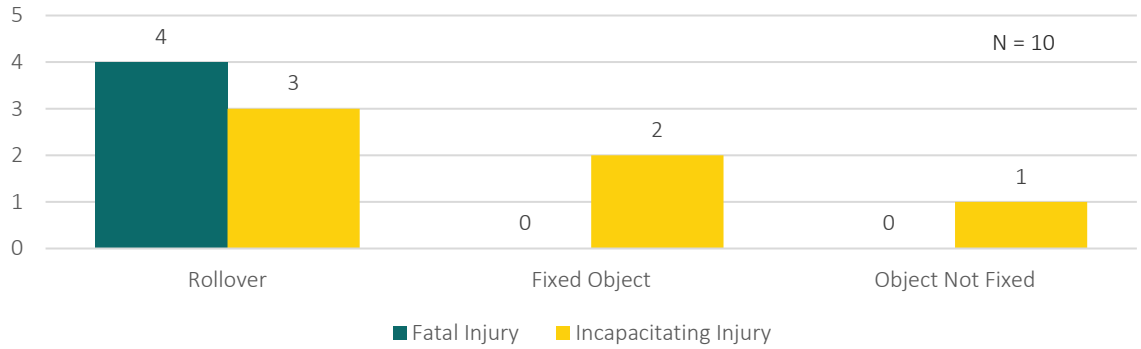
Benefits of developing safety plans have been well documented. Benefits include opportunities to leverage resources; work toward a common goal; and consideration of all road users. Developing safety plans has proven results that have helped in the reduction of deaths and injuries in Tribal and non-Tribal communities alike.

During the 11-year time interval between 2012-202, 70 crashes (or approximately 7 crashes per year) were reported within the Santo Domingo Pueblo. Crashes that occurred on Interstate 25 (I-25) were filtered out of this analysis, as many of these Interstate types of crashes are not typically seen within the Pueblo.

During the same 11-year time interval reporting, there were three (3) fatal crashes, 24 injury crashes, and 43 property damage only crashes. In total, these crashed involved 149 occupants.

Of the 149 occupants involved, there were a reported four (4) fatal injuries, six (6) incapacitating injuries, 18 suspected minor injuries, 21 possible injuries and 100 property damage only crashes. The reported three (3) fatal crashes resulted in four (4) fatalities or approximately one (1) fatality every three (3) years over the 11-year time interval within the Santo Domingo Pueblo. The leading crash types resulting in fatal and incapacitating injuries occurred from Rollover crashes, accounting for approximately 70% of all fatal and incapacitating injury crashes. Below summarizes the top crash types resulting in fatal and incapacitating injury crashes.

Figure 1: Fatal and Incapacitating Injuries (2012-2022)



In 2024 the Santo Domingo Pueblo undertook efforts to develop a Tribal Transportation Safety Plan that would identify existing safety efforts, transportation safety issues, and identify strategies for implementation that would address these issues. As part of the safety plan development, Tribal and other interested parties came together to review existing data, ongoing safety efforts, and to identify new or continuing strategies to improve transportation safety in Tribal communities. The strategies were prioritized around the 4Es (Education, Enforcement, Emergency response and Engineering) of safety. The 4Es are outlined below. Note that enforcement and emergency response have been combined, and *safety planning/other strategies* have been included.

Education

- Continue and Expand the Pueblo Wide Transportation Education Program

Enforcement/EMS

- Incorporate the use of Speed Radar Trailers as a Deterrent

Engineering

- Designate School Crosswalks and School Bus Stop Locations
- Mileage Reference Markers and Delineation Along Routes
- Perform Road Safety Audit on BIA, Tribal and County Roadways
- Develop a Pueblo-Wide Signing and Pavement Marking Project
- Establish a Highway Fencing Program
- Develop Multi-Use Pathways and Pathway Lighting Projects
- Highway 22 Pedestrian Structure
- Incorporate Speed Feedback Signs within School Zones
- Improve Roadway and Pedestrian Lighting Throughout the Pueblo
- Mateo Overpass on NM Highway 22 at Indian Service Route 88

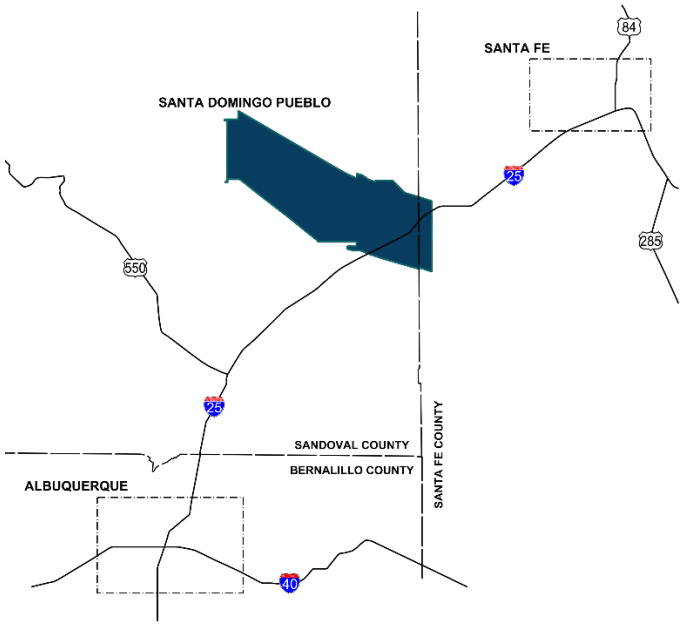
Safety Planning/Other Strategies

- Improve Crash Data Collection and Sharing
- Improve Communication with Santo Domingo Pueblo and NMDOT on current and future projects.

BACKGROUND

The Pueblo of Santo Domingo Pueblo encompasses approximately 68,000 acres (106 square miles) of land in north central New Mexico, with another 800 acres (one square mile) along the southern edge comprising a joint area shared with the neighboring San Felipe Pueblo. Much of this land is Tribally owned, though specific information on this was unavailable when the study was published. Almost all of the Pueblo is located in Sandoval County, with the far eastern reaches extending into Santa Fe County. It is bordered on the west by the Santa Fe National Forest and by the San Felipe and Zia Pueblos; on the north by the Cochiti Pueblo, BLM lands, and private lands; and on the south and east by BLM lands and private lands.

Figure 2: Santo Domingo Pueblo Location



Santo Domingo Pueblo has a population of 4,185 with the Village as the largest community. Santa Fe, New Mexico with a population of 89,000, is about 33 miles northeast of the Pueblo and Albuquerque, New Mexico with a population of 560,000, lies about 38 miles southwest of the Pueblo.

Available data has indicated that injury and fatality crash rates on reservations are higher than the rest of the United States. Federal programs are available to help resolve traffic related crashes and provide safer reservation transportation routes for Tribal members and the traveling public. The Federal Highway Administration (FHWA) created the Tribal Transportation Program Safety Funds (TTPSF) aimed at addressing safety issues and needs of Tribal governments for transportation and access on reservations. Each year, two percent of the total available Tribal Transportation Program (TTP) funds are awarded for safety improvements through a competitive application program.

The FHWA has emphasized the development of a Tribal Transportation Safety Plan as a first step in implementing a comprehensive safety program. This is clearly seen in the funding emphasis on safety planning and the ranking criteria that requires any safety project application be linked to a transportation safety plan.

A Tribal Transportation Safety Plan is a community based, Shared-disciplinary approach to identify transportation safety issues and potential implementation strategies with the goal of improving transportation safety on Tribal Lands. The FHWA describes them as:

"Tribal Transportation Safety Plans are a tool used to identify and address transportation risk factors that have a potential of leading to serious injury or death. Safety Plans also organize the efforts of a variety of entities to more effectively reduce risk and can cover multiple transportation modes (roads, maritime, trails, air travel, and others). Safety plans may lead to implementation of a project or program, renewed efforts in an existing program, or further study of a roadway section (using an engineering study or Road Safety Audit).

A Tribal Safety Plan should not be developed with a focus on any one funding source. Instead, a Tribal Safety Plan should demonstrate the safety concerns in a community and the strategies that will be explored to implement the plan. To the greatest extent possible, the concerns demonstrated by a safety plan should be selected based on incident history (data). Data allows funding entities to understand the needs and may even compel the funding of the community's needs. Safety Plans can provide a forum for utilizing data sets that are not otherwise considered by funding agencies such as public testimony when formal crash data does not exist."

Benefits of developing safety plans have been well documented and include the opportunity to leverage resources, work toward a common goal and consider all road users resulting in reduced deaths and injuries in Tribal and other communities.

HISTORICAL CRASH DATA

Historical crash data contained in the New Mexico Department of Transportation (NMDOT) Crash Database, occurring within the Santio Domingo Pueblo, was provided by New Mexico Statewide Traffic Records System (NMSTRS) for a 11-year time interval covering January 1, 2012, through December 31, 2022. Crash data is submitted to the NMDOT Crash Database by state and local agencies using the New Mexico Uniform Crash Report (NM UCR). Historical crash data was not available from the Bureau of Indian Affairs (BIA) Law Enforcement. The crashes, which they respond to, and the crash information collected are not typically reported to NM UCR.

Obtaining information from BIA Law Enforcement can be a lengthy process due to the Freedom of Information Act (FOIA), as tribal members must submit a request to release the information. Once a request is submitted the information released to the applicant can take years with redacted information. Thus, resulting in a long process to obtain the information.

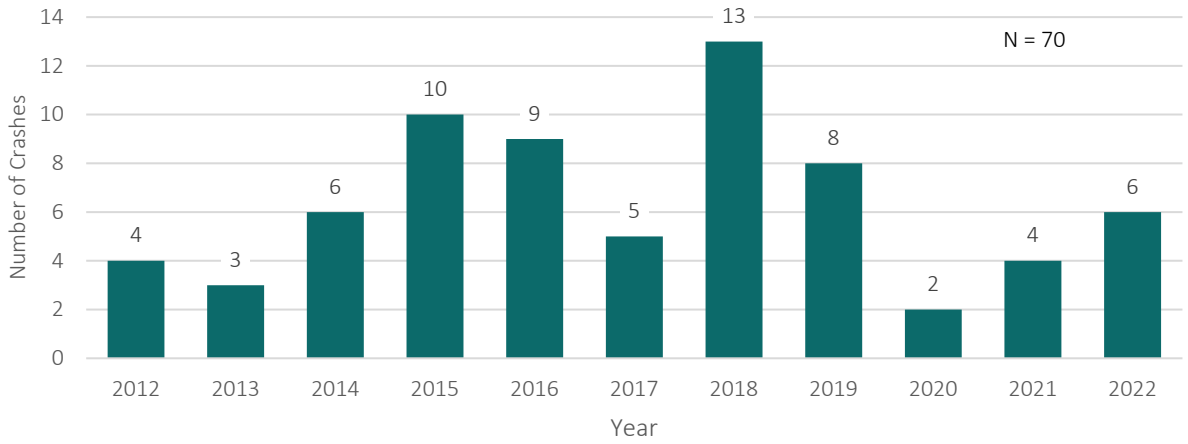
One of the important factors in the development of a Tribal Transportation Safety Plan is the available crash data analyzed and utilized in the identification of issues and development of strategies. Adequate crash information plays a crucial role for the Pueblo as this information can be used to assist in applying and securing federal and state funding and TTPSF funds for safety improvements on roadways throughout the Pueblo, as many request data to support the grant application. Available crash data shown in this plan was analyzed to reflect contributing factors to traffic-related deaths and injuries on the Pueblo.

With crash data only being limited to what was reported to the NMDOT Crash Database, the data only shows a small portion of actual crashes that may have occurred throughout the Pueblo.

Location of Crash

During the 11-year time interval between 2012-2022, there were a reported 70 crashes or approximately 7 crashes per year within the Santo Domingo Pueblo. Crashes that occurred on Interstate 25 (I-25) were filtered out of this analysis, as many of these types of crashes are not typically seen within the Pueblo. **Figure 3** shows the number of reported crashes per year within the Santo Domingo Pueblo.

Figure 3: Number of Reported Crashes per Year within the Santo Domingo Pueblo (2012-2022)



Crash Types

Fixed Object crashes were the most common reoccurring event throughout the 11-year time interval, accounting for 18 of the 70 crashes or 25.7% of all reported crashes. The other three top leading crash types observed are Rollover crashes accounting for 15 crashes or 21.4% of all reported crashes, Angle crashes accounting for 14 crashes or 20.0% of all reported crashes and Rear-End crashes accounting for 6 crashes or 8.6% of all reported crashes. **Figure 4** shows the different crash types that occurred within Santo Domingo Pueblo from 2012-2022.

Figure 4: Crash Types (2012-2022)

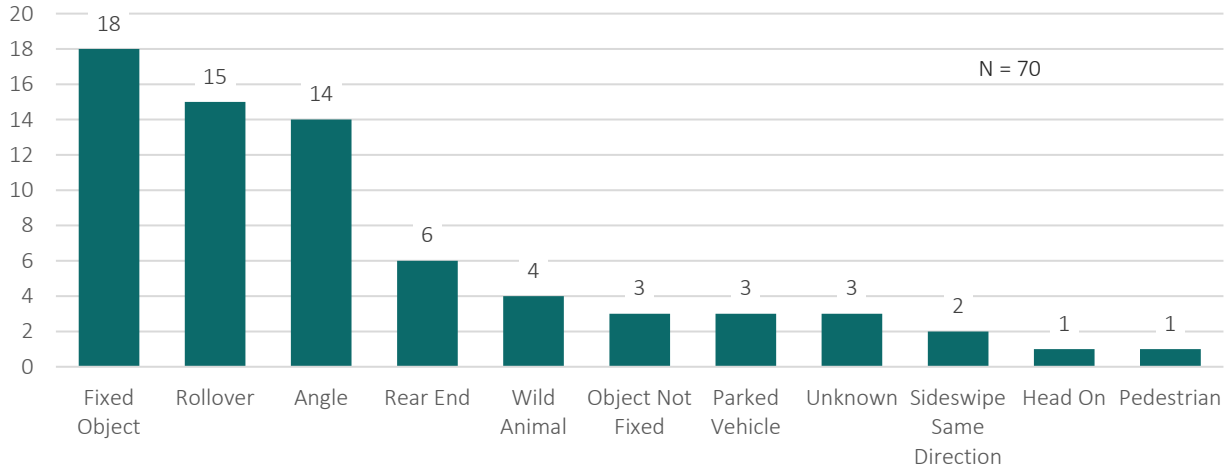
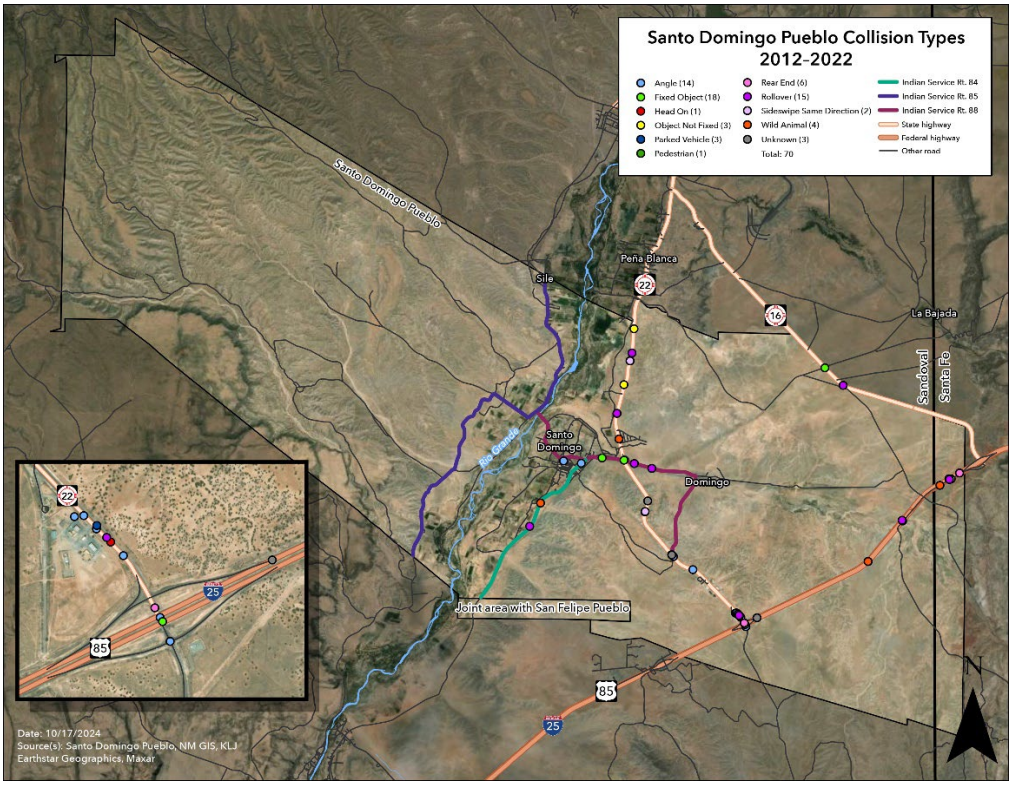


Figure 5 shows the locations of the different crash types that occurred within Santo Domingo Pueblo from 2012-2022.

Figure 5: Crash Type Locations (2012-2022)



Crash Injury Severity

During the studied 11-year time interval, there were a reported 3 fatal crashes, 24 injury crashes and 43 property damage only crashes for a total of 70 reported crashes. **Figure 6** shows the crash severities reported within the Santo Domingo.

Figure 6: Reported Crash Severities (2012-2022)

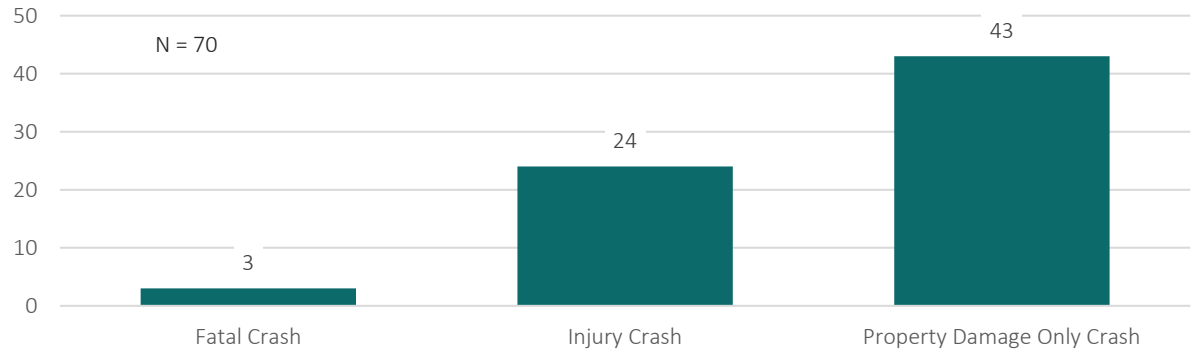
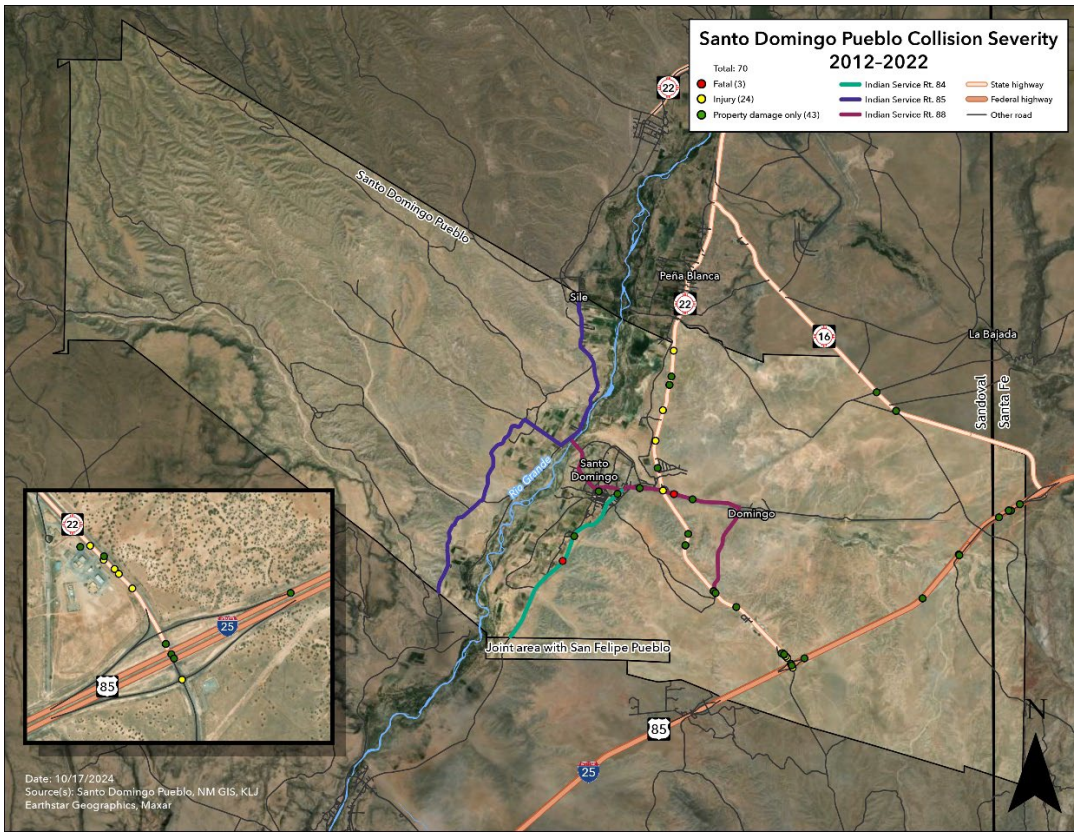


Figure 7 shows the locations of the different crash severities that occurred within Santo Domingo Pueblo from 2012-2022.

Figure 7: Reported Crash Severity Locations (2012-2022)

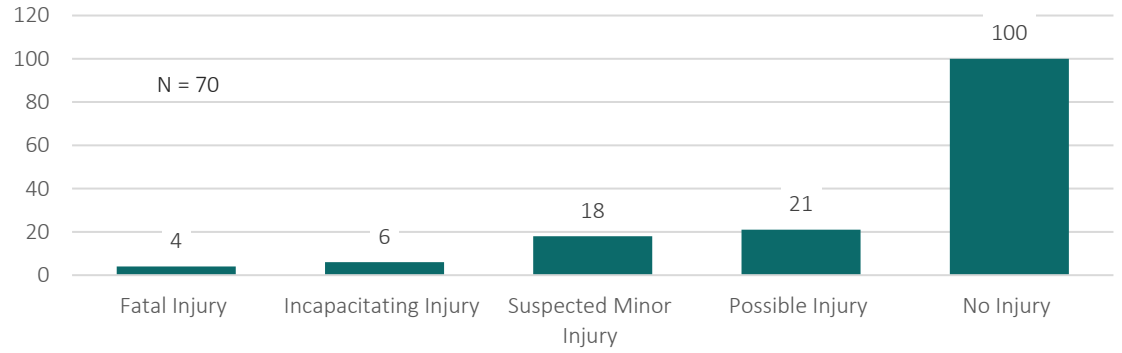


The 70 accidents reported involved 149 occupants. Crash injury severity is classified into five different categories. These categories are:

- Fatal Injury – An injury results in death. An injury caused death that occurs within 30 days of an accident.
- Incapacitating Injury – Any injury, other than a fatal injury, which prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before the injury occurred.
- Suspected Injury – Any injury, other than a fatal injury or an incapacitating injury, which is evident to observers at the accident scene.
- Possible Injury – Any injury reported or claimed which is not a fatal injury, incapacitating injury, or non-incapacitating injury.
- No Injury

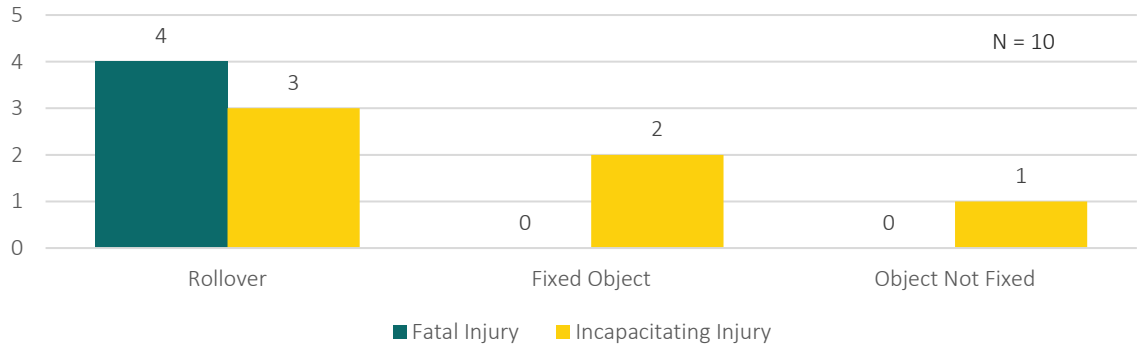
Of the 149 occupants involved in crashes, four (4) resulted in a Fatal Injury and six (6) resulted in an Incapacitating Injury. **Figure 8** summarizes the different crash injury severities for each occupant involved in a crash within the Santo Domingo Pueblo.

Figure 8: Reported Crash Severity Per Occupant (2012-2022)



Fatal and Serious injury crashes stand out due to their impact on lives. The four (4) fatal injuries reported were resulting from Rollover crashes. Of the six (6) reported incapacitating injury crashes, three (3) were resulting from Rollover crashes, two (2) were the result of a Fixed Object Crash and one (1) was the result of an Object Not Fixed crash. **Figure 9** summarizes the different crash types for Fatal and Serious Injuries.

Figure 9: Fatal and Incapacitating Injuries (2012-2022)



2025 Tribal Transportation Safety Management Plan

This 2025 plan was developed using available data and the personal knowledge and expertise of the planning meeting participants. The group included Tribal safety representatives from engineering, maintenance, and planning. A list of participants is included in the appendices.

The planning group reviewed the available crash data to develop a list of issues that are currently affecting transportation safety on the Pueblo. The group then identified the existing programs on the Pueblo and identified additional strategies that need to be implemented to address safety issues. The following sections document these discussions and the outcomes.

Issues Causing Crashes on Santo Domingo Pueblo

The crash data analysis identifies several transportation safety issues that are causing crashes, increasing crash severity, or restricting complete data analysis. Those that are supported by the data included:

- The Occurrence of Rollover Crashes
- Presence of Fixed Objects
- Lack of Driver Experience

The group identified several other transportation safety issues based upon personal experience that are causing crashes, increasing crash severity, or are otherwise creating transportation safety concerns in the local communities. These include:

- Continue and Expand the Pueblo Wide Transportation Education Program
- Develop a Livestock Ordinance
- Incorporate the use of Speed Radar Trailers as a Deterrent
- Improve Roadway and Pedestrian Lighting
- Develop Multi-Use Pathways
- Improve Crash Data Collection

Implementation Strategies

The plan's main goal is to use a multi-disciplinary approach to identify safety strategies for implementation that can address the transportation safety issues within the Santo Domingo Pueblo. The strategies are intended to be implemented over the next several years and each have a Strategy Champion and Funding Opportunities identified. The strategies were developed as a comprehensive approach to safety, including education, enforcement, emergency management opportunities, and engineering.

Education Strategies

Continue and Expand the Pueblo Wide Transportation Education Program

The Santo Domingo Pueblo should work with law enforcement, schools, and other interested parties on the Pueblo to provide education on transportation safety. Areas to consider for continuing education include:

- Education Program for Distracted Driving
- Education Program for Alcohol and Drug Impaired Driving
- Education Program for Youth and Senior Driving
- Education Program for Pedestrian and Bicycle Safety

These programs would use and build on national safety campaign themes on impaired driving, seat belt use, texting and driving and other transportation safety issues, by using local leaders, or other easily recognizable individuals from

the Pueblo Community to promote these safety themes. Many safety campaigns across the country have shown a greater rate of success when they are made culturally relevant to the tribal audience and utilize local talent to deliver the safety message.

Strategy Champion: Santo Domingo Pueblo Transportation Department, Education Department, County Sherrif and BIA Law Enforcement, Tribal Services, Tribal Information Services, Youth Council/Committees, Risk Management Division

Funding Opportunity: BIA Indian Highway Safety Program (IHSP)

Enforcement Strategies

Incorporate the use of Speed Radar Trailers as a Deterrent

Other Tribal Law Enforcement agencies have been using Speed Trailers that use radar to provide feedback on vehicle speeds to help reduce speeds in tribal communities and around schools. These trailers can also collect and store the speed data for use in determining areas for targeted enforcement due to high speeds. With speeding being a major cause of crashes on the Santo Domingo Pueblo and the concerns that have been expressed about speeds and safety around schools, the Pueblo should purchase several sets of speed trailers. These could be used by law enforcement in the various tribal communities as part of a targeted education and enforcement campaign to help reduce speeds.

Figure 10: Example of a Speed Radar Trailer[1]



Strategy Champion: Santo Domingo Pueblo Transportation Program and BIA Law Enforcement

Funding Opportunity: TTP, TTPSF or BIA IHSP

Engineering Strategies

Designate School Crosswalks and School Bus Stop Locations

One area where there was an identified need was establishing designated school crosswalks and school bus stop locations. Designated school crosswalks will allow school age children to cross the street at safer locations that are visibly marked. This can be accomplished by adding flashing beacons, crosswalks, and other traffic control.

Designated school bus stop locations will allow for a safer place for children to wait for the school bus by properly signing these locations along the road. In addition, shelters could be provided in these areas to provide protection from adverse weather while waiting for the school bus. The Pueblo currently has two designated locations but have expressed the need for additional locations.

[1] https://www.fdlsheriff.com/patrol/radar-trailer

An engineering study should be completed to identify areas for potential school crossing within the communities along with potential bus stop locations.

Strategy Champion: Santo Domingo Pueblo Transportation Program

Funding Opportunity: TTP Safety Funding, TTP Funding

Mileage Reference Markers and Delineation Along Routes

Currently within the Pueblo all the routes that are paved and unpaved, no mileage post (MP) and delineators are present. MP's assist motorist in letting them know how far they have traveled on a particular route, let them know the distance to their destination and most importantly in the event of an accident or roadside emergency it will allow them to give a more precise location to first responders.

Delineators along the roadway are used for motorist guidance at night and during adverse weather. Delineators are also beneficial at locations where roadway alignment changes and are considered as guidance devices rather than warning devices. They come in various sizes and designs to address varying applications. Delineators are typically used on rural roadways with no street lighting and marking approaches.

It is recommended that MP's and delineators installed on paved BIA routes within the Pueblo.

Strategy Champion: Santo Domingo Pueblo Transportation Program

Funding Opportunity: TTP Safety Funding, TTP Funding

Perform Road Safety Audit on BIA, Tribal and County Roadways

Road Safety Audits (RSAs) have been an important tool for many Tribes and one that the Santo Domingo Pueblo could utilize. RSAs provide an opportunity to bring traffic and safety expertise to assess safety concerns along routes where there are high numbers of crashes or where there have been specific concerns. The goal of these RSAs is to identify safety issues and then develop specific transportation safety improvements that may include signing, lighting, striping, pathways, intersection improvements and other activities to rectify shortcomings.

The Pueblo should pursue funding to accomplish an RSA for the BIA, Tribal and county roadways within the Pueblo.

Roadways to consider are:

- Indian Service Route 84
- Indian Service Route 85
- Indian Service Route 88
- BIA 840
- Old Highway 22
- NM Highway 22

Strategy Champion: Santo Domingo Pueblo Transportation Program

Funding Opportunity: TTP Safety Funding.

Develop a Pueblo-Wide Signing and Pavement Marking Project

There are many roadways within Santo Domingo Pueblo that do not currently have adequate highway signing or pavement markings installed. The absence or deteriorated nature of these highway signs and markings can significantly impact transportation safety. With the predominant crash for injuries and fatalities being a single vehicle running off the road and then overturning, the addition of improved signing and markings could help to reduce these types of crashes.

Figure 11: Worn Pavement Markings on Indian Service Route 85



Installation of signing and markings has long been identified by the FHWA as proven low-cost safety improvements. A project should be developed to design and install these features in compliance with the Manual on Uniform Traffic Control Devices (MUTCD).

Consideration should also be considered for the following:

- Improve roadway signing within the communities including proper speed limits.
- Improve school zone signing.
- Identify and improve roadway signing for low water crossings.

Strategy Champion: Santo Domingo Pueblo Transportation Program.

Funding Opportunity: TTP Funding, TTP Safety Funding.

Establish a Highway Fencing Program

One area of concern on the Santo Domingo Pueblo is the presence of wild and domestic animal on the roadways. Crash data shows that both domestic animals and wild animals rank in the top five for total crashes. These crashes show the need to install, repair and improve fencing along roadways on the Pueblo. Some of these roadways are state routes, any fencing program would need to be coordinated with New Mexico Department of Transportation. Other Pueblo programs such as these have been coordinated with Tribal Ordinances that empower Tribal Programs with the ability to gather and hold livestock that is running loose on highway rights-of-way. For a successful program, it is recommended that similar coordinated efforts be developed.

Figure 12: Example of Highway Fencing[2]



[2] https://westerntransportationinstitute.org/publication/2018/new-publication-on-the-effects-of-wildlife-fencing/

Strategy Champion: Santo Domingo Pueblo Tribal Council, Santo Domingo Pueblo Transportation Program and NMDOT.

Funding Opportunity: TTP Funding and TTP Safety Funding.

Develop Multi-Use Pathways and Pathway Lighting Projects

There are locations within the Santo Domingo Pueblo where there is pedestrian/bike traffic, and the Pueblo has identified specific need for pathways. The locations are primarily within the Village and included access to the school, medical facilities, and safety complex. Multi-Use pathways should be considered to separate pedestrians from vehicle traffic. The need for these pathways has been present for some time and has increased as there is a need for access to Pueblo communities and schools.

Figure 13: Multi-Use Pathway with Pedestrian Lighting



Lighting should be considered along urban or other pathways as appropriate to increase pedestrian visibility, provide for traffic calming and potentially increase security. Solar powered and/or LED lighting could be used to reduce the cost for providing power and the need for continual power usage. An example of a solar powered lighting system is shown, and several companies produce such systems.

Figure 14: Solar Pedestrian Lighting Example[3]



[3] https://www.sepco-solarlighting.com/solar-pathway-landscape-lighting

Village to Sile Multi-Use Pathway

This multi-use pathway would connect the Village to Sile which is located approximately 4-miles to the north of the village. The multi-use pathway would begin within in the Village at the intersection of Second/Third Street and Indian Service Road 88. The multi-use pathway would be 10-feet wide and constructed in multiple phases and could include pedestrian lighting depending on the available funding.

PHASE I

Phase I would begin at the intersection of Second/Third Street and Indian Service Road 88 within the Village and head west parallel along Indian Service Road 88 for approximately 0.9-miles where it would terminate at the newly constructed bridge with pedestrian features that crosses the Rio Grande River. Phase I of this project could include pedestrian lighting depending on the available funding.

The estimated project construction cost for the multi-use pathway and pedestrian lighting are shown below:

- Multi-Use Pathway Construction: $1,485,750.00
- Multi-Use Pathway Lighting $334,294.00
- Multi-Use Pathway Lighting Desing and Construction Engineering: $63,862.00
- Multi-use Pathway Design and Construction Engineering: $283,815.00
- Phase I Project Total: $2,167,722.00

PHASE II

Phase II would begin where Phase I terminates on the west side of the bridge for approximately 200-feet. It would then head north parallel to Indian Service Road 85 for approximately 1.8- miles at a canal service road. Phase II of this project could include pedestrian lighting depending on the available funding.

The estimated project construction cost for the multi-use pathway and pedestrian lighting are shown below:

- Multi-Use Pathway Construction: $2,886,600.00
- Multi-Use Pathway Lighting $667,526.00
- Multi-Use Pathway Lighting Desing and Construction Engineering: $127,515.00
- Multi-use Pathway Design and Construction Engineering: $551,408.00
- Phase II Project Total: $4,233,049.00

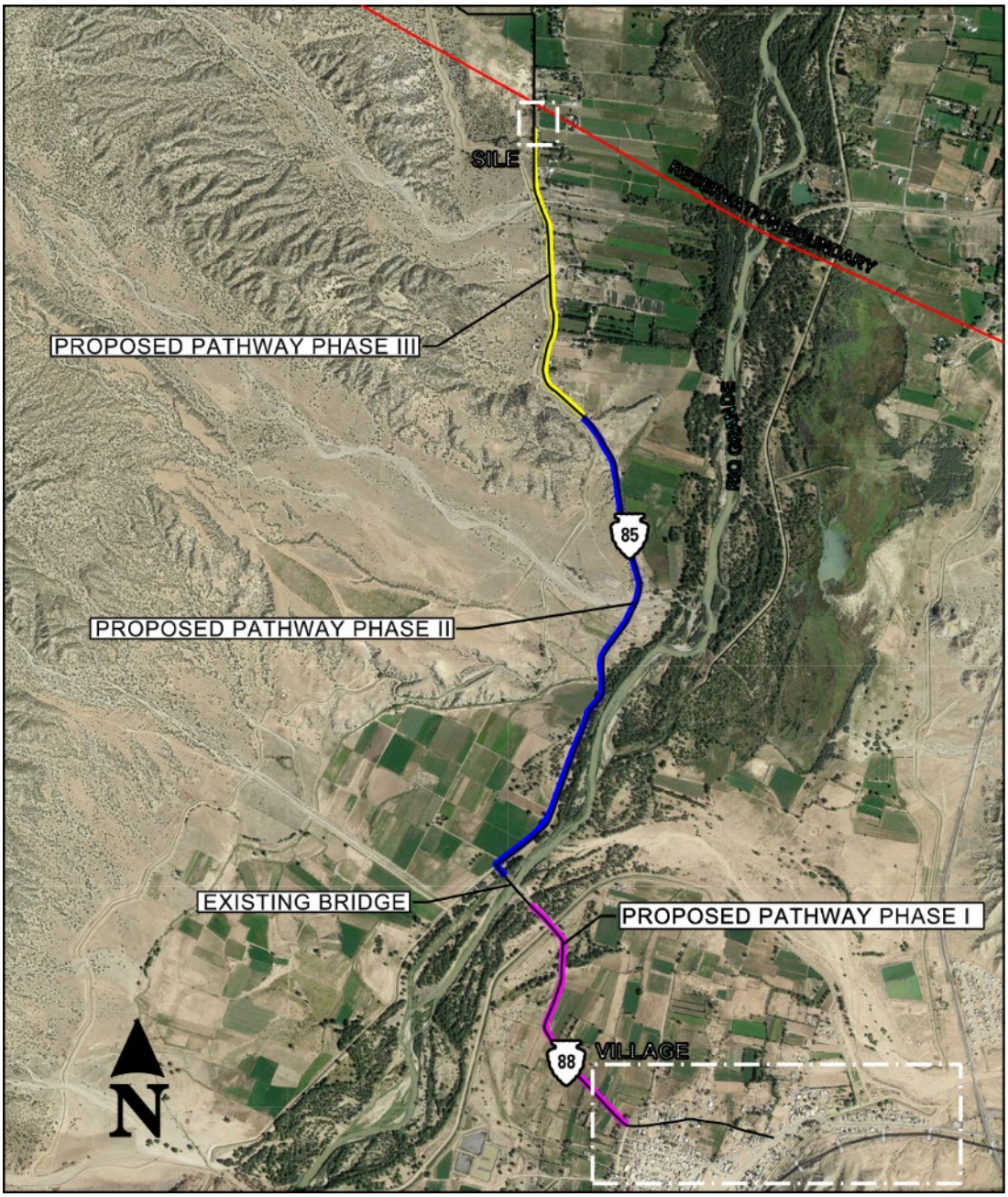
PHASE III

Phase III would begin where Phase II terminates at a canal service road. It would continue north running parallel to Indian Service Road 85 for approximately 1.0-miles and terminate within the community of Sile. Phase III of this project could include pedestrian lighting depending on the available funding.

The estimated project construction cost for the multi-use pathway and pedestrian lighting are shown below:

- Multi-Use Pathway Construction: $1,602,488.00
- Multi-Use Pathway Lighting $371,438.00
- Multi-Use Pathway Lighting Desing and Construction Engineering: $70,958.00
- Multi-use Pathway Design and Construction Engineering: $306,117.00
- Phase III Project Total: $2,351,003.00

Figure 15: Village to Sile Multi-Use Pathway



Strategy Champion: Santo Domingo Pueblo Transportation Program

Funding Opportunity: TTP Funding, TTP Safety Funding and NMDOT TAP

Old Highway 22 to NM Highway 22 Pathway

This multi-use pathway would connect the Village to the Trading Post, then connect to the early childhood development center, the school, medical facilities, and safety complex. Previous planning and construction have been completed for the first two phases of this multi-use pathway that connected the Village to the Trading Post and Road Runner Train Station along Indian Service Road 88, then headed south parallel to Old Highway 22 for approximately 0.25-miles. The additional phases of this multi-use pathway would begin where Phase II terminated on Old Highway 22 and continue south toward NM Highway 22. The multi-use pathway would be 10-feet wide, constructed in additional phases and could include pedestrian lighting depending on the available funding.

PHASE III

Phase III would begin at where the previously constructed Phase II ended on Old Highway 22 and continue to run south following parallel to the roadway. The multi-use pathway would be approximately 1.3-miles long and terminated at the intersection of Old Highway 22 and NM Highway 22. Phase III of this project could include pedestrian lighting depending on the available funding.

The estimated project construction cost for the multi-use pathway and pedestrian lighting are shown below:

- Multi-Use Pathway Construction: $2,122,500.00
- Multi-Use Pathway Lighting $482,869.00
- Multi-Use Pathway Lighting Desing and Construction Engineering: $92,236.00
- Multi-use Pathway Design and Construction Engineering: $405,450.00
- Phase III Project Total: $3,103,055.00

PHASE IV

Phase IV would begin at the intersection of Old Highway 22 and NM Highway 22 and run east parallel along NM Highway 22. It would then terminate at the intersection of NM Highway 22 and BIA 846 (Health Center Frontage Road). The multi-use pathway would be approximately 0.9-miles long and could include pedestrian lighting depending on the available funding.

The estimated project construction cost for the multi-use pathway and pedestrian lighting are shown below:

- Multi-Use Pathway Construction: $1,485,750.00
- Multi-Use Pathway Lighting $334,294.00
- Multi-Use Pathway Lighting Desing and Construction Engineering: $63,863.00
- Multi-use Pathway Design and Construction Engineering: $283,815.00
- Phase IV Project Total: $2,167,722.00

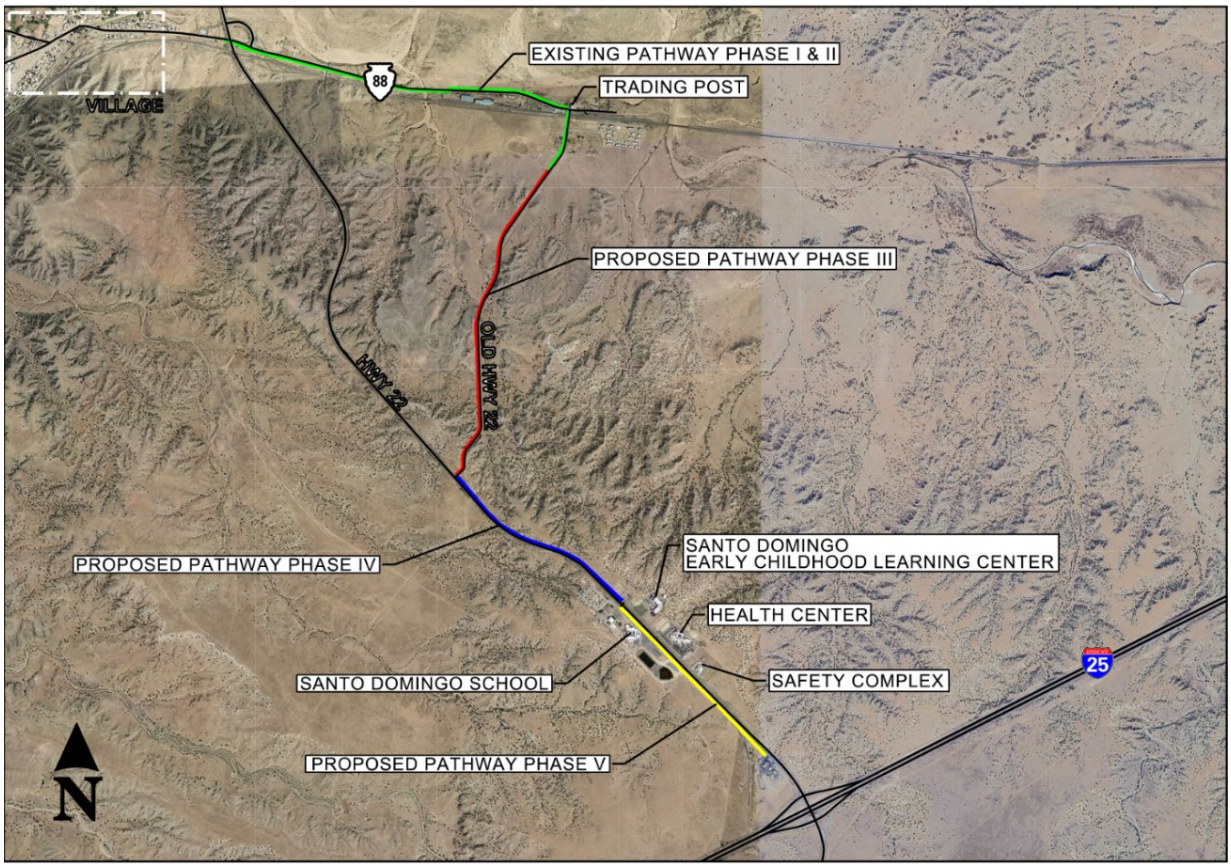
PHASE V

Phase V would begin at the intersection of NM Highway 22 and BIA 846 (Health Center Frontage Road) continuing to head east where it would terminate by the Santo Domingo Tribal Housing Authority and gas station near Interstate 25. The multi-use pathway would be approximately 0.8-miles long and could include pedestrian lighting depending on the available funding.

The estimated project construction cost for the multi-use pathway and pedestrian lighting are shown below:

- Multi-Use Pathway Construction: $1,284,113.00
- Multi-Use Pathway Lighting $297,150.00
- Multi-Use Pathway Lighting Desing and Construction Engineering: $56,767.00
- Multi-use Pathway Design and Construction Engineering: $245,300.00
- Phase V Project Total: $1,883,330.00

Figure 16: Old Highway 22 to NM Highway 22 Multi-Use Pathway



Strategy Champion: Santo Domingo Pueblo Transportation Program

Funding Opportunity: TTP Funding, TTP Safety Funding and NMDOT TAP

Highway 22 Pedestrian Structure

Currently, there are no safe pedestrian crossing along NM Highway 22 near the early childhood learning center, medical center, the school, and a small community of homes. There is a need for a grade separated structure to meet this need and provide safe crossing of the highway for school age children and other community members.

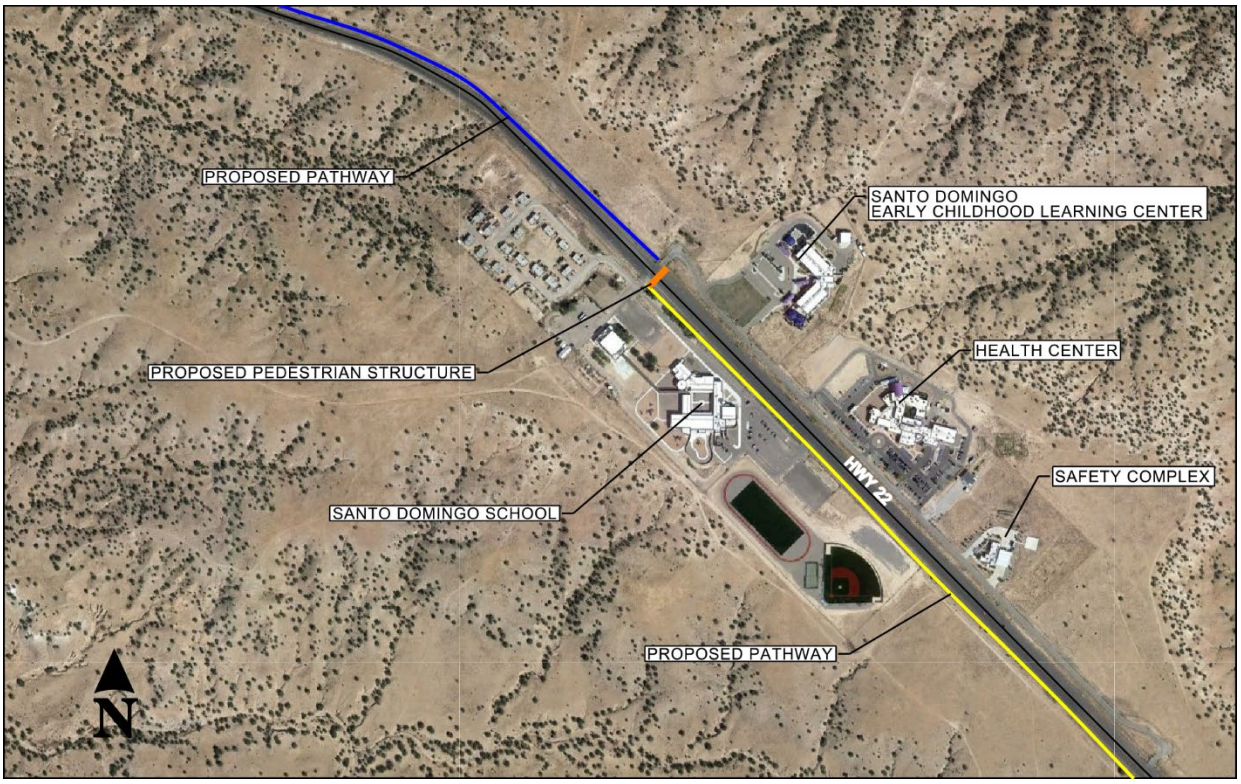
An example of an existing pedestrian structure is shown below. This pedestrian structure is on the Flathead Indian Reservation and crosses over US Highway 93 in Pablo, MT.

Figure 17: Pedestrian Structure Example[4]



The proposed location for the Pedestrian Structure would begin on the north side of NM Highway 22 at the intersection with BIA 846 and head south across the highway connecting near the school. The approximate length of the structure would be 120-feet to span the complete length of the highway. Based on the cost of other similar structures, this grade separated pedestrian structure would cost approximately $1,400,000.00 for design and construction.

Figure 18: NM Highway 22 Pedestrian Structure



[4] https://www.aisc.org/globalassets/modern-steel/archives/2012/12/2012v12_welcoming.pdf

Strategy Champion: Santo Domingo Pueblo Transportation Program

Funding Opportunity: TTP Funding, TTP Safety Funding, Active Transportation Infrastructure Investment (ATII) and NMDOT TAP

Incorporate Speed Feedback Signs within School Zones

An issue that was identified as a concern was the prevalence of speeding within school zones. Speed Feedback Signs (SFS) provide drivers with feedback about their speed in relationship to the posted speed limit. They can be an effective method to help reduce speeds at desired locations when properly installed at certain distances upstream in both directions to maintain the desired speed reductions. It is recommended that an engineering study be completed to identify desired school zone locations, desired speeds within the school zone, and proper locations for the SFS to be placed.

Figure 19: Example of a Speed Feed Back Sign within a School Zone



Strategy Champion: Santo Domingo Pueblo Transportation Program

Funding Opportunity: TTP Safety Funding, TTP Funding

Improve Roadway and Pedestrian Lighting Throughout the Pueblo

An area of concern that was discussed was the lack of roadway and pedestrian lighting throughout the many communities within the Santo Domingo Pueblo. Roadway lighting provides a visual performance and visual comfort to assist in keeping a driver alert while on the roadway. Pedestrian lighting, as previously discussed, increases pedestrian visibility, and could provide for traffic calming and potentially increase security. Due to the high cost that can be associated with roadway and pedestrian lighting it is recommended that an engineering study be completed to identify all existing functioning and non-functioning lighting throughout the communities. After the inventory of all existing lighting, a community outreach should be completed to identify areas of concern that tribal members may have. Once these areas have been identified, a complete engineering lighting analysis should be completed. This will allow for multiple projects to come to fruition and be prioritized by the Pueblo.

Strategy Champion: Santo Domingo Pueblo Transportation Program
Funding Opportunity: TTP Safety Funding, TTP Funding

Mateo Overpass on NM Highway 22 at Indian Service Route 88

The Mateo Overpass serves as the main entrance for the Pueblo to the Village from Interstate 25 coming from the east and for Pueblo residing in the Gallesteo Subdivision from the north. The interchange also provides access to

Indian Service Route 88, which serves as the main road under the Mateo Overpass, connecting the Village on the west side of the interchange to the trading post and Rail Runner train station to the east of the interchange.

NMDOT has been in communication with the Santo Domingo Pueblo regarding updating and replacing the current bridge. The bridge's current vertical clearance is approximately 13.83-feet. This clearance does not meet current standards and does not allow for delivery vehicles and other larger vehicles to brings goods and services directly to the Village. In addition, Indian Reservice Route 88 roadway underneath the overpass is relatively narrow and provides a 4-foot walking path to connect the recently completed pathway that follows along the roadway, connecting the Village all the way to the trading post. Due to the narrow two-lane roadway many vehicles cannot pass underneath the overpass simultaneously and have to go one vehicle at a time. This creates a safety risk for the potential accidents to occur.

One option that NMDOT is proposing to update the overpass by lengthening the bridge and increasing its vertical clearance. The proposed new vertical clearance would range from 15.4-feet to 17.7-feet, bringing the structure up to current design standards. They are also proposing a new typical section of Indian Service Route 88. This typical section would allow for a 4-foot shoulder, two 12-foot travel lanes, curb and gutter, and an 8-foot sidewalk. This would allow vehicles to travel underneath the overpass simultaneously, increasing safety and provide a greater separation for pedestrian traffic.

Figure 20: Mateo Overpass Option 1



An alternative option that is under consideration with MNDOT for the overpass is to turn the interchange into a full interchange and include west diagonal ramps. This would allow for the most direct access to Indian Service Route 88. Consideration would need to account in the following:

- Major impacts to existing utilities
- New alignment for Indian Service Route 88
- Need for additional right-of-way – approximately 1.84 acres
- Bridge reconstruction in railroad right-of-way
- An approximate $12.7 million in preliminary cost

Figure 21: Mateo Overpass Alternative Option (Santo Domingo Pueblo Preferred Option)



This is the preferred option for the Santo Domingo Pueblo. The large cost associated with a full bridge replacement, NMDOT has been working with the Pueblo to find additional resources in order to help fund this project.

Strategy Champion: Santo Domingo Pueblo Transportation Program and NMDOT
Funding Opportunity: TTP Safety Funding, TTP Funding, TTPBP Funding, NMDOT, and BUILD Grant

Safety Planning and Other Strategies

Discussions we done to assist on safety improvements within the Pueblo. The two main topics to assist for improvements include:

- Improve Crash Data Collection and Sharing
- Improve Communication with Santo Domingo Pueblo and NMDOT on current and future projects.

APPENDIX A: MEETING AGENDA

Santo Domingo Pueblo Tribal Safety Plan 2024

Agenda

October 24, 2024

In Person and Via Teams

1:00 p.m.	Welcome and Introductions
1:15 p.m.	Background and Overview
	- Discussion of Tribal Safety Plans, including need
	- Presentation of Crash and Safety Data
	- Questions and Discussion of Data
	- Discussion of safety issues and concerns
2:00 p.m.	Existing safety approaches (this is any practice the Tribe is utilizing to address transportation safety i.e. education to public, crash reporting/processes, EMS or engineering projects)
3:00 p.m.	Break
3:15 p.m.	Development of Safety Activities to include in Plan including all 4E's
	- Identification of Strategies
	- Education
	- Enforcement
	- EMS
	- Engineering
	- Implementation Steps
	- Identification of Champions for Specific Elements
	- Identification of Potential Funding Sources
	- Identify Grant Opportunities
3:45 p.m.	Questions/Discussion of Process or other Items
4:00 p.m.	Wrap up and/or Site Visit to any Locations

APPENDIX B: MEETING PARTICIPANTS



Santo Domingo Pueblo Tribal Transportation Safety Plan			
Attendance List			
Name:	**Organization:**	**Phone:**	**Email**
Teresa Little-Gardiner	Bernalillo Public Schools	505-306-4896	tgardiner@bernalillops.org
Daniel Boyd	BIA	505-563-3436	daniel.boyd@bia.gov
Marlene Kelley	BIA	505-653-3433	marlene.kelley@bia.gov
Nicole Shaw, PE	HWM	505-206-6151	nicoleshaw@highwatermark.com
Beth Schatz, PE	KLJ	505-586-5120	beth.schatz@kljeng.com
Chad Fischer, PE	KLJ	623-324-1660	chad.fischer@kljeng.com
Craig Genzlinger, PE	KLJ	406-461-2222	craig.genzlinger@kljeng.com
Ian Butler-Severson, PM	KLJ	651-726-5032	ian.severson@kljeng.com
Elsa Goossen	NMDOT	505-469-9941	elsa.goosen@dot.nm.gov
Nathan Wagliardo	NMDOT	505-479-1538	nathan.wagliardo@dot.nm.gov
Sullivan Moore	NMDOT	505-467-9392	sullivan.moore@dot.nm.gov
Robert Fasthorse	SD Road Maintenance	505-220-3520	robert.fasthorse@kewa-nsn.us
Kathy Ashley	SD Transportation Director	505-269-4766	kathy.ashley@kewa-nsn.us
James Tonoria	SDTHA	505-465-1003	lchaves@sdtha.org

Appendix C: 2024 Tribal Transportation Safety Plan Presentation

Tribal Transportation Safety Plan

October 2024

Goal of Safety Planning

- Reduce the frequency of fatal and serious injury transportation incidents through coordination of efforts by:
  - Elected Officials / Council
  - Public
  - Administrators
  - Educators
  - Enforcement
  - Engineers
  - Emergency Medical Responders
  - And Others…

Safety Plan Focus

- Not Focused on any one funding source or program
- Focused on the modes that are most significant to the community.
- **Its your Plan!**
  - Roads
  - Trails
  - Air
  - ATV

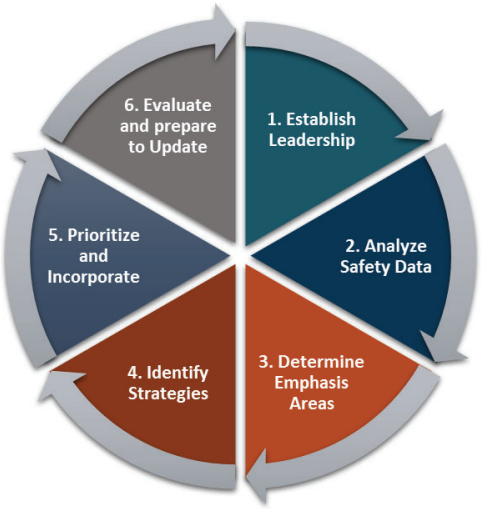


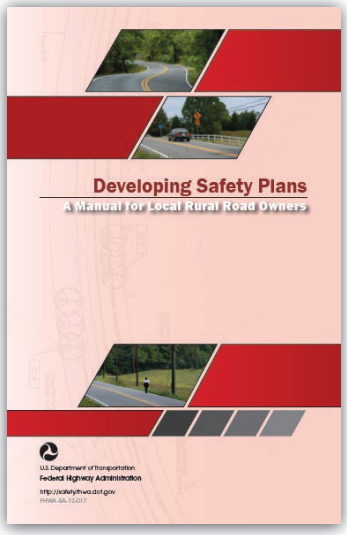
Benefits of Safety Planning



- Opportunity for coordinated efforts & shared resources within a community toward common goal
- Establish communication & form partnerships with local, State, and Federal
- Tool to leverage funding and resources
- Action Plan

Safety Planning Process

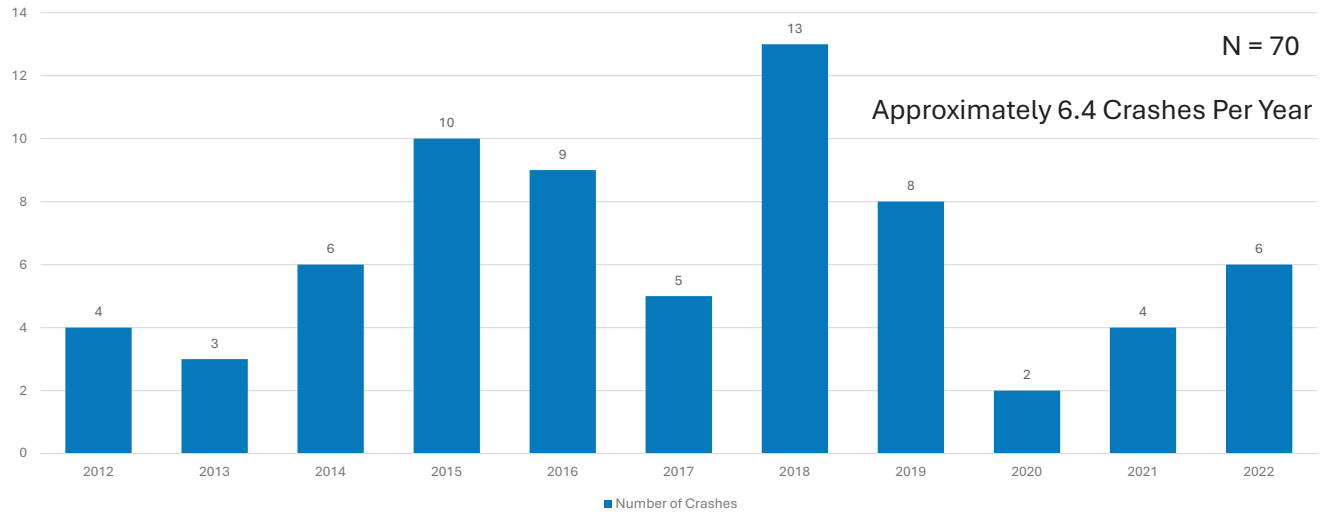




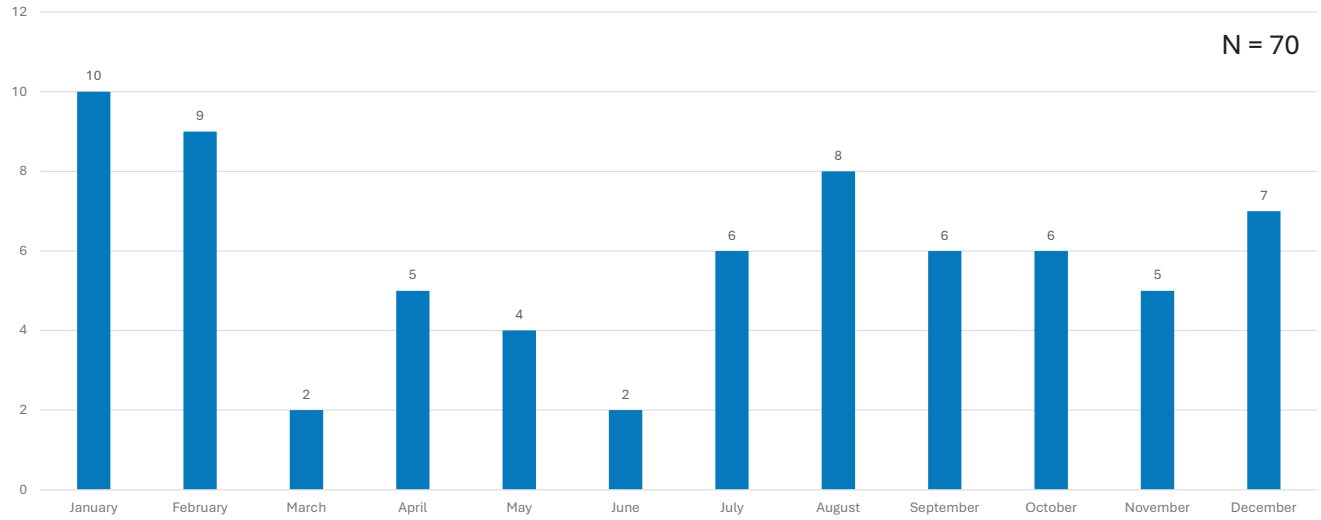
Crash Data 2012 - 2022

- New Mexico Department of Transportation (NMDOT)
- Local Data ?

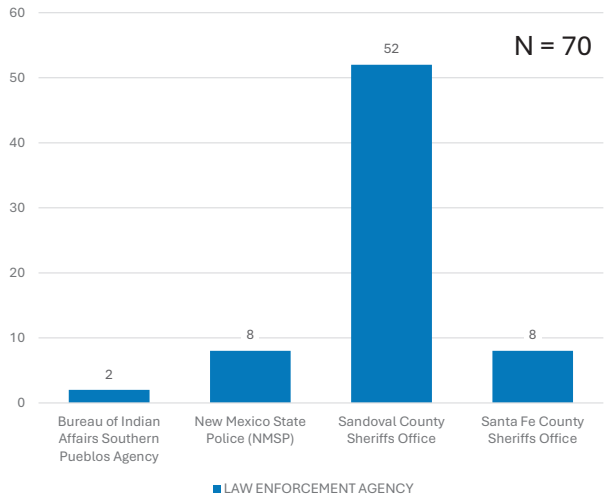
Santo Domingo Pueblo Total Crashes per Year: 2012 - 2022

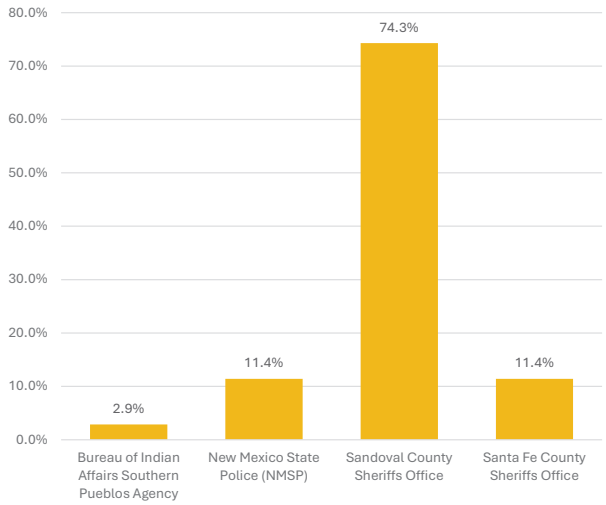


Number of Crashes by Month (2012 - 20222)

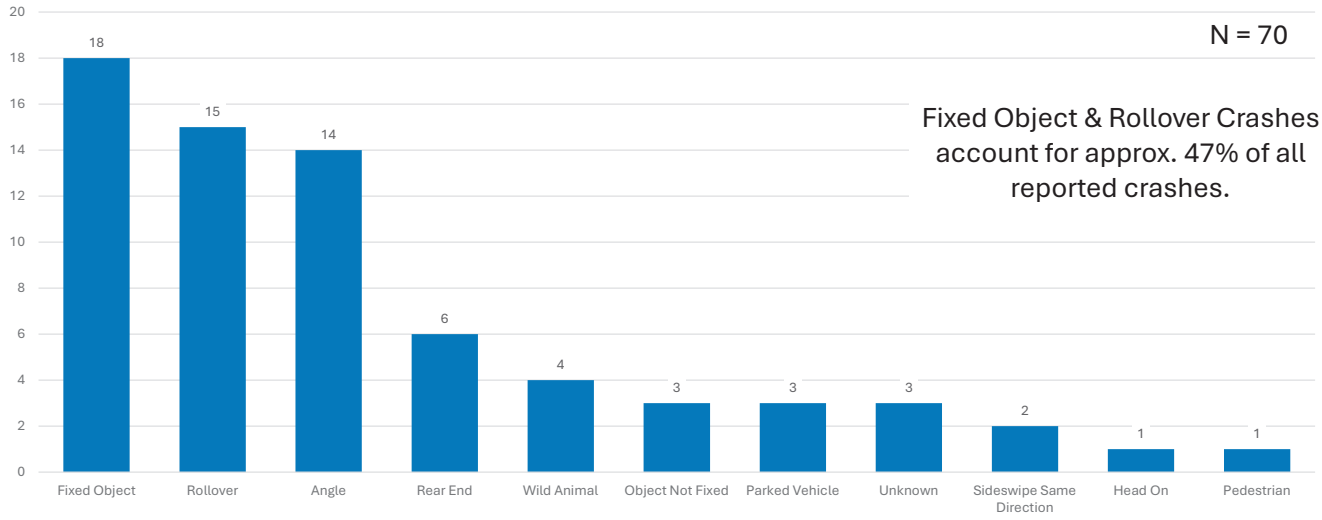


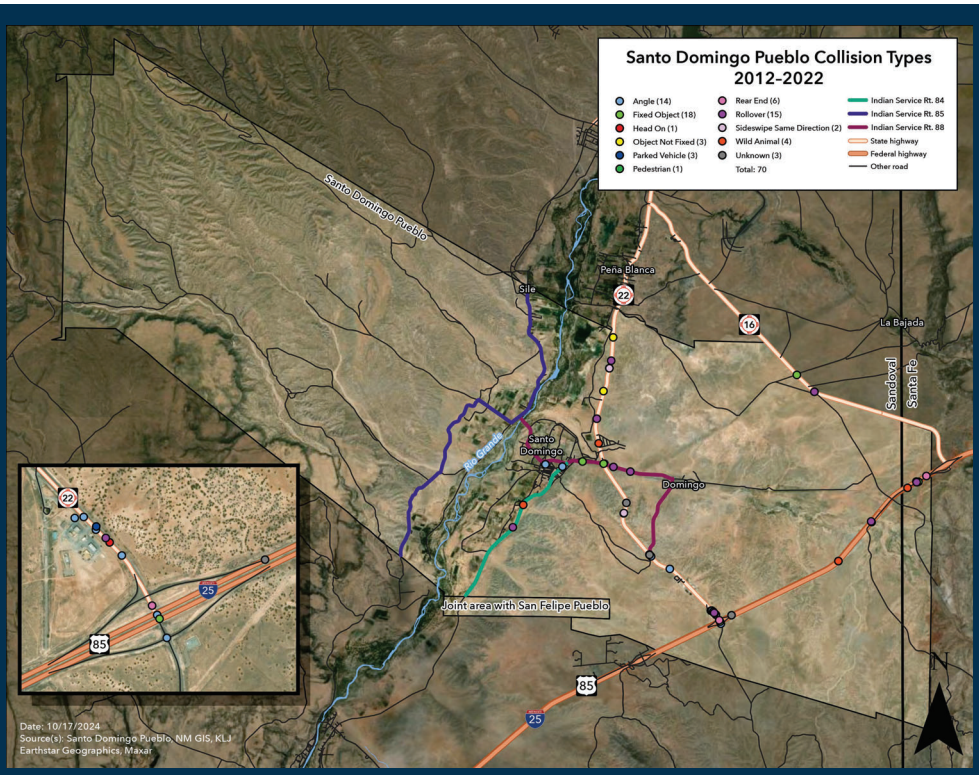
Responding Agency for Crashes (2012 – 2022)



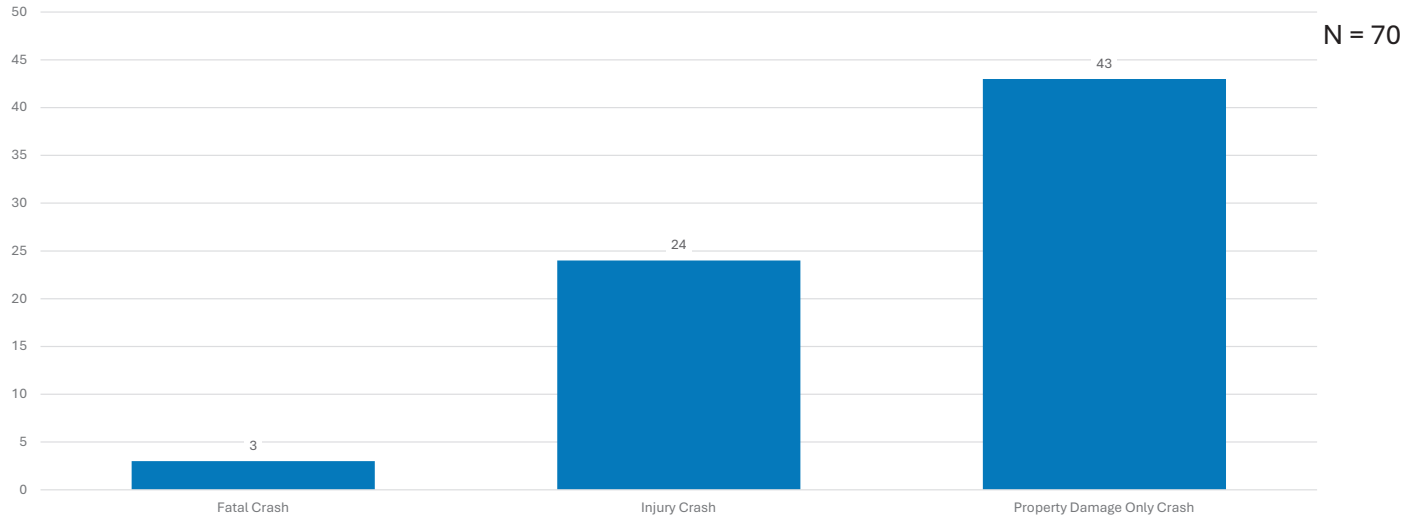


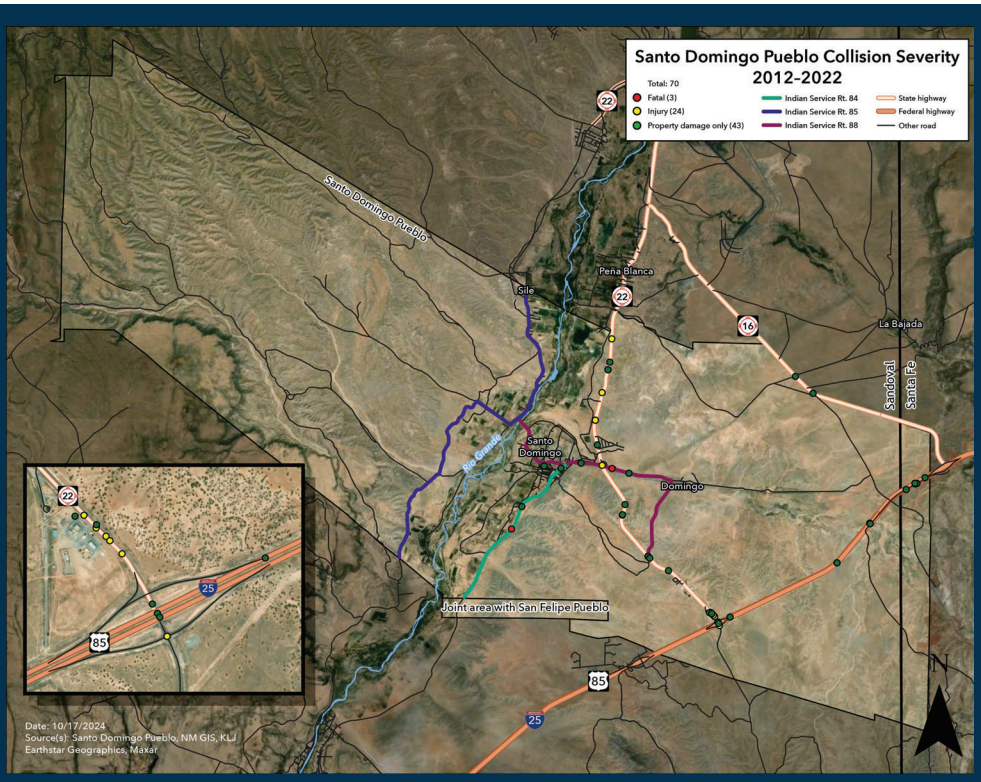
Crash Types (2012 – 2022)



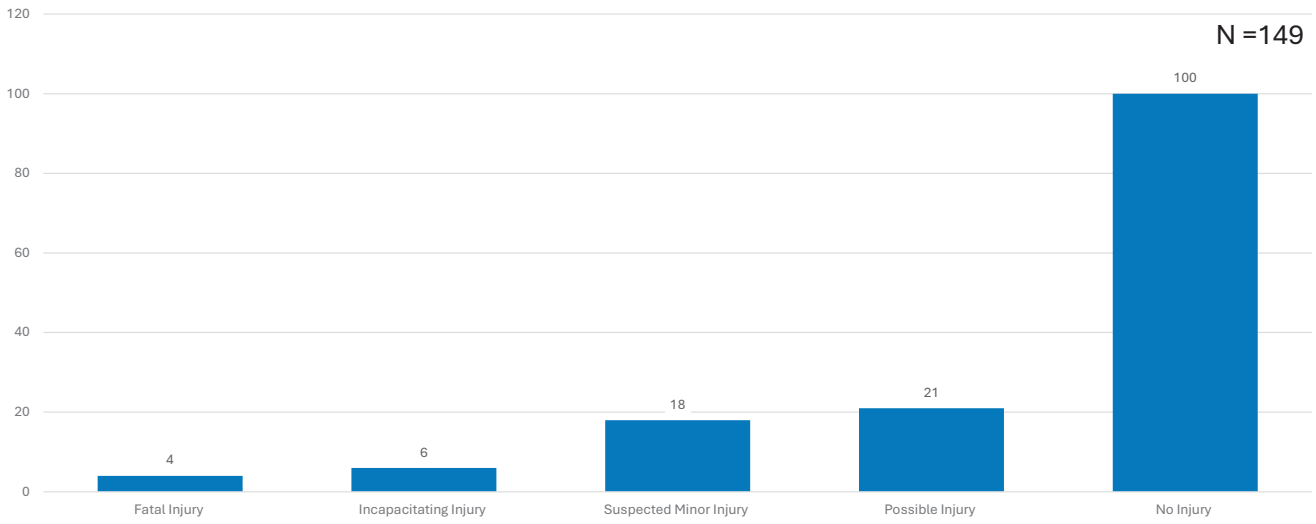


Crash Severity (2012 – 2022)

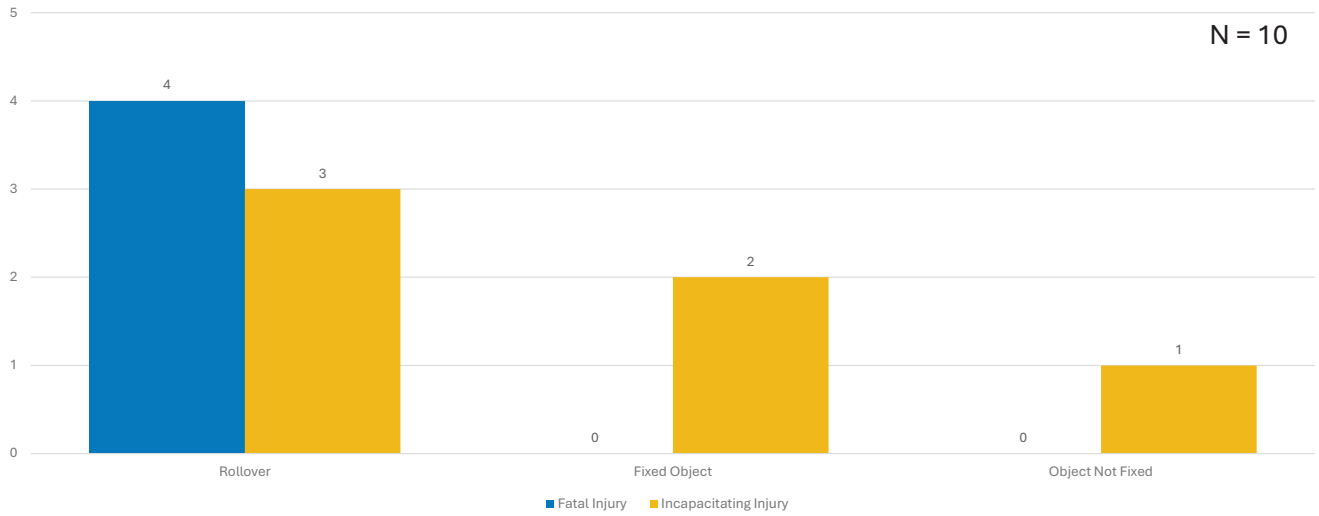




Types of Crash Injuries (2012 – 2022)



Fatal & Incapacitating Crash Types (2012 – 2022)



Types of Involvement for Crashes

- Alcohol Involvement Crashes = 8 crashes (approx. 11.4%)
- Drug Involvement Crashes = 3 crashes (approx. 4.3%)
- Pedestrian Involvement Crashes = 1 crash (approx. 1.4%)
- Motorcycle Involvement Crashes = 2 crashes (approx. 2.9%)
- The following had zero crash involvement
  - Bicycles
  - Heavy Trucks
  - Commercial Vehicles
  - School Busses
  - Hazardous Material Vehicles

Tribal Data

- Data Similar to what you are experiencing?

- Tribal Safety Data?
  - Seat Belt Usage?
  - Check Points
  - Anecdotal

Existing Safety Programs & Issues/Concerns

- What Programs are Currently in Place?
- Data Driven and Anecdotal
- Problem Location?
- Problem Driver Behavior?
- Resource Issues?



Safety Countermeasures

- Strategies to Improve Safety
  - Education
  - Enforcement
  - EMS
  - Engineering
  - Data Improvements
  - Strategies to Improve Safety
- Identification of Champions for Specific Elements
- Identification of Potential Funding Sources
- Identify Grant Opportunities

Questions & Discussion

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