

SUSANVILLE RANCHERIA
Tribal Transportation Safety Assessment
PS23040



Final Report

Assessment Team

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November 2023

This report was produced in cooperation with the Susanville Rancheria. Funding for this program was provided by a grant from the California Office of Traffic Safety, through the National Highway Traffic Safety Administration. Opinions, findings, and conclusions are those of the authors and not necessarily those of the University of California and/or the agencies supporting or contributing to this report.

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FINAL REPORT

NOVEMBER 2023

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LIST OF ABBREVIATIONS

ATA:	Active Transportation Assessment
BAC:	Blood Alcohol Concentration
CIM:	Crash Investigation Manual
CLEC:	California Law Enforcement Challenge
CHP:	California Highway Patrol
CAMUTCD:	California Manual on Uniform Traffic Control Devices
DAR:	Drug alcohol recognition
DRE:	Drug recognition expert
DUI:	Driving Under the Influence
GIS:	Geographic Information System
LTAP:	Local Technical Assistance Program
MOU:	Memorandum of Understanding
MPO:	Metropolitan Planning Organization
NHTSA:	National Highway Traffic Safety Administration
OTS:	Office of Traffic Safety
PCF:	Primary Crash Factor
PDO:	Property Damage Only
PIO:	Public Information Officer
POST:	Peace Officer Standards and Training
RMS:	Record Management System
RTPA:	Regional Transportation Planning Authority
RV:	Recreational Vehicle
SFST:	Standard Field Sobriety Test
SR:	State Route
SWITRS:	Statewide Integrated Traffic Records System
TOF:	Traffic Offender Fund
TTSA:	Tribal Transportation Safety Assessment
CVC:	California Vehicle Code

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EXECUTIVE SUMMARY

The Susanville Indian Rancheria (SIR) had an earlier Tribal Transportation Safety Assessment (TTSA) study conducted by the Safe Transportation Research and Education Center (SafeTREC) at the University of California, Berkeley in 2021. Two professionals produced the suggestions in the report provided to SIR in April 2021, and SIR requested another study to the findings and suggestions of the April 2021 study. One engineer conducted the present study to revalidate the previous study using the latest data and revisiting the locations. This study included in-person tours of the area and a meeting with stakeholders and tribal staff on May 15, 2023.

The primary objective of the TTSA is to suggest ways to improve traffic safety for motorists, pedestrians and bicyclists on roadways within the SIR tribal land, as well as those accessing tribal lands.

The assessment accomplishes the following objectives:

- Documents existing conditions and safety issues associated with pedestrians, bicycles, roadways, and transportation facilities on or near tribal lands.
- Provides transportation data and analysis to support tribal transportation planning programs and grant funding applications.
- Suggests transportation improvements (infrastructure and non-infrastructure).
- Identifies potential sources of funding for suggested transportation improvements.

This report is organized as follows:

Chapter 1 introduces this report, assessment objectives and approach, the information used, and the tribal staff consulted.

Chapter 2 presents background information and a vicinity map. This chapter also discusses the traffic crash data obtained from Statewide Integrated Traffic Records System (SWITRS) and UC Berkeley's Tribal Transportation Injury Mapping System (TIMS) and presents an analysis of the crash data.

Chapter 3 provides a summary of community engagement survey responses and a discussion of how this report addresses community members' concerns.

Chapter 4 presents an engineering review of the four following areas of concern that were selected by representatives of the Rancheria based on their knowledge of the areas of concern on the roads which provide access to their tribal lands during the initial meeting of the site visit:

1. Joaquin Street Traffic Conditions.
 - a. Intersection with Chestnut Line of Sight. In addition, the school bus drop-off on Chestnut east of the intersection limiting sight distance of drivers accessing from Joaquin Street.
 - b. Traffic Calming Signage
 - c. Pedestrian Crossing

2. Spring Ridge Drive and Highway 139 Intersection Evaluation.
 - a. Visibility coming out of Spring Ridge
 - b. Tribal identification along Highway 139
 - c. Intersection advance warning and street name warning

3. Spring Ridge Drive Striping and Numa Road Intersection
 - a. Pedestrian conditions
 - b. Wayfinding Signs
 - c. Signage and stop bars

4. Chestnut and Paul Bunyan Road and Grand Avenue Intersection
 - a. Pedestrian conditions
 - b. Signage and stop bars
 - c. Safe Route for pedestrians to Joaquin Street

1. INTRODUCTION

1.1. BACKGROUND

The SIR requested that the UC Berkeley Safe Transportation Research and Education Center (SafeTREC) conduct a TTSA study for their tribal property. Two traffic safety experts conducted the TTSA site visit and prepared this report. This report revalidates the previous TTSA study and presents the findings and suggestions of the safety experts to improve vehicular traffic as well as bicyclist and pedestrian safety on tribal lands.



State Highway 139 at Spring Ridge Drive. Looking South.

The ***Tribal Transportation Safety Assessment*** program is based on the following major safety assessment projects:

- Successful, award-winning, ongoing program for Complete Streets Safety Assessments for California Communities (i.e., cities and counties), funded by the California Office of Traffic Safety (OTS).
- The Tribal Transportation Safety Assessment (T2SA) program in 2017, funded by the California Department of Transportation. These assessments helped 15 California Native American communities identify and implement transportation safety solutions that led to improved safety for motorists, passengers, bicyclists, and pedestrians on tribal lands.
- The Active Transportation Needs Assessment (ATNA) program in 2021, with funding from a Caltrans Sustainable Communities Grant to the Cher-Ae Heights Indian Community of the Trinidad Rancheria, which engaged the National Indian Justice Center (NIJC). These assessments helped 10 California Native American communities identify and implement

transportation safety solutions that led to improved safety for motorists, passengers, bicyclists, and pedestrians on tribal lands.

- The Tribal Transportation Safety Assessment (TTSA) program in 2021, funded by the California Department of Transportation. These assessments helped seven California Native American communities identify and implement transportation safety solutions that led to improved safety for motorists, passengers, bicyclists, and pedestrians on tribal lands.
- The Tribal Transportation Safety Assessment (TTSA) Program in 2022, funded by the Robert Wood Johnson Foundation (RWJF). These assessments helped seven other California Native American communities identify and implement transportation safety solutions that led to improved safety for motorists, passengers, bicyclists, and pedestrians on tribal lands.

This assessment will provide the SIR with a highly focused, in-depth, expert safety review of problem areas and specific suggestions for safety improvements within their jurisdiction, as well as on the roadways accessing their land. It is anticipated that this service will:

- Help SIR government identify and document the need for transportation infrastructure improvements on their tribal lands.
- Provide a report to be used to justify improvements and support their eligibility for future grant applications.
- Provide a comprehensive list of potential sources of funding with emphasis on tribal funding eligibility.
- Provide SIR with an independent review of local and regional projects that may affect safety and access to tribal areas.
- Provide SIR a credible source of information that fosters collaboration between the tribe and the neighboring local agencies' engineering, public works, planning and community development departments.



Spring Ridge Road Looking East

1.2. ASSESSMENT OBJECTIVE

The primary objective of this TTSA is to improve motor vehicle, bicycle, and pedestrian traffic safety in the SIR area. During the initial meeting and conference call, the tribal representatives expressed their concerns regarding various locations in the vicinity of the tribal land that provide access to various tribal lands and residents.

1.3. ASSESSMENT APPROACH

The TTSA safety experts visited the SIR on May 15, 2023 after having reviewed various traffic crash records and other tribal Land-related information in addition to the suggestions and findings from the 2021 TTSA report. SafeTREC staff coordinated a telephone conference call with all stakeholders and discussed the scope of the assessment with the tribal representatives. Since some of the study locations were adjacent to roadways maintained and operated by the City of Susanville, it was decided during the call to invite a representative from the city. During the field visit, the safety experts discussed local needs and concerns with tribal land representatives and a representative from the city and observed the physical and traffic conditions within the study area.

1.4. INFORMATION USED IN THE ASSESSMENT

Information used to prepare this report is shown in Table 1-1:

Table 1-1: Information Used in This Assessment

Item	Period	Source
SafeTREC Traffic Injuries Mapping in California Tribal Areas, Crash Data Analysis and Maps	2011-2022	https://tribaldata.berkeley.edu/
Statewide Integrated Traffic Records System (SWITRS)	2011-2022	California Highway Patrol
Tribal Transportation Safety Assessments: Online Survey & Intake Application	June 2023	Institute of Transportation Studies, UC Berkeley
Community Engagement Survey	September 2023	Institute of Transportation Studies, UC Berkeley
Susanville Indian Rancheria 2017 Strategic Transportation Safety Plan	2017	Red Plains
Susanville Indian Rancheria TTSA Study Report	2021	Institute of Transportation Studies, UC Berkeley

1.5. ACKNOWLEDGEMENTS

The following members of Susanville Rancheria staff and the CHP regional office staff are acknowledged for their cooperation in providing the needed data and their input on local conditions:

- Russ Burriel,
SIR Public Works Director
- Aaron R. Brazzanovich,
SIR Environmental Technician
- Mary Dazey, SIR Grant Administrator
- Kelly Mumper, Planner,
City of Susanville



1.6. DISCLOSURES

The suggestions presented in this report are based on general knowledge of best practices in traffic engineering operations and planning and limited field observations and time spent on or near the reservation, and discussions with the tribal staff. It may not incorporate all factors relevant to traffic safety issues. The suggestions are intended to assist tribal staff and others in planning and implementation of future safety improvement projects.

This report is intended to be conceptual in nature and conditions may exist in the study areas that were not observed and may not be compatible with suggestions in this report. Before finalizing and implementing any physical changes, tribal staff may conduct more detailed studies or analysis to refine or discard the suggestions in this report, if they are found to be contextually inappropriate or appear not to improve traffic safety or traffic operations due to conditions that may include high vehicular traffic volume or speeds, physical limitations on space or sight distance, or other potential safety concerns.

2. BACKGROUND AND CRASH HISTORY

2.1. BACKGROUND

The SIR is in Lassen County, California, and is the Tribal land of the Susanville Indian Rancheria of the Maidu, Paiute, Pit River, and Washoe Tribes — Native Americans who once settled in the lands around the Sierra Nevada foothills.

In 2010 the total land base of Susanville Rancheria was 1,337.53 acres. In 2016 under the bipartisan "Susanville Indian Rancheria Lands Bill," the federal government transferred 300 acres of traditional tribal lands from the Bureau of Land Management to the Rancheria, with the Department of Interior taking it into trust on their behalf. This will "enable the tribes to preserve vital cultural and natural resources."

The Rancheria was founded in 1923 and since then has increased in size through acquisitions. In 1923 the Lower Rancheria was 30 acres. In 1975 the Rancheria acquired the Susanville Cemetery, 0.53 acres. The Upper Rancheria includes 120 acres acquired in 1978 and 875 acres acquired in 2002, totaling 995 acres. By 2000 the Rancheria comprised 150 acres, including 72 acres acquired in Herlong where it currently has 50 acres pending. In addition, 80 acres in Ravendale were given to the tribe, and in 2003 the tribe purchased 160 acres in Cradle Valley.

As of Sept 5, 2019, the tribe's voting membership was 843. Including members under the age of eighteen there are a total membership of 1,272, which includes 184 elders (55 years of age and older), 659 adults between 18 and 54 years of age, and 429 minors.

Figure 2-1 outlines the boundaries of the Susanville Indian Rancheria in blue.

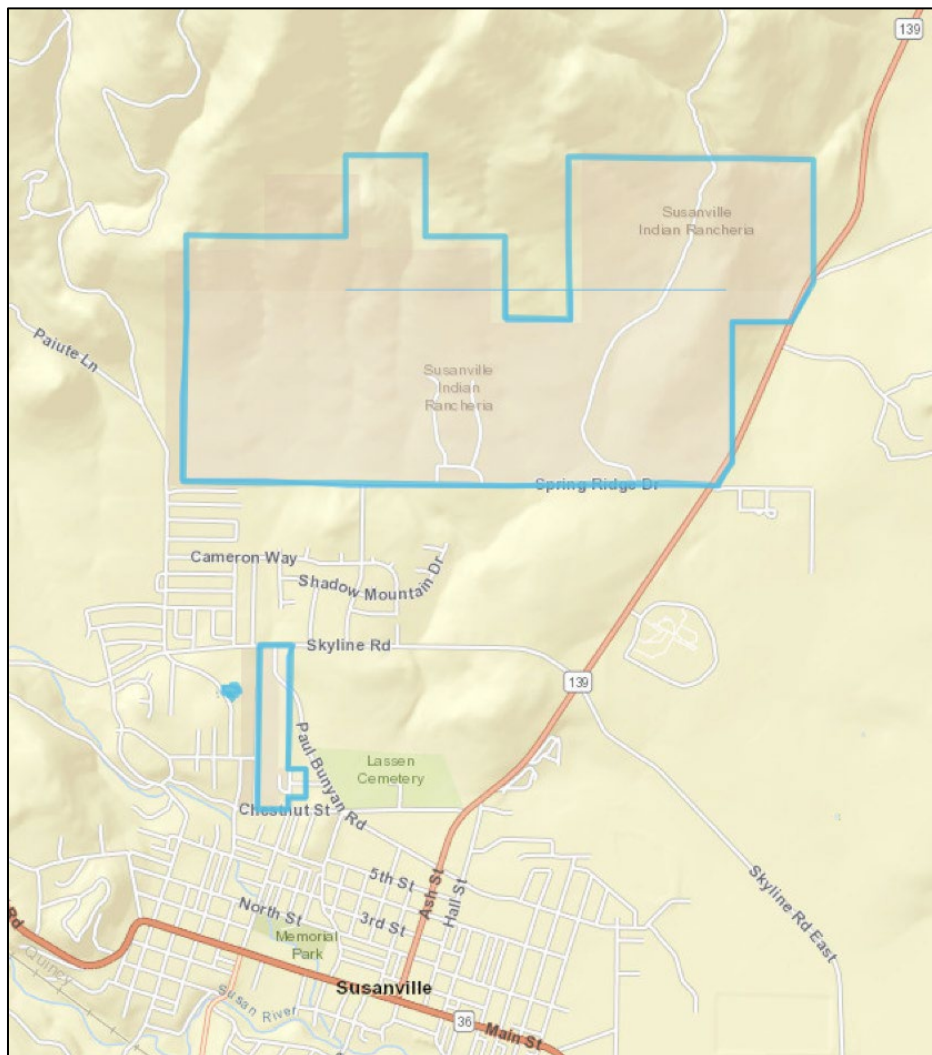


Figure 2-1: Susanville Indian Rancheria Vicinity Map

2.2. TRAFFIC CRASH REPORTING AND HISTORY

The California Highway Patrol (CHP) maintains a traffic crash database called the “Statewide Integrated Traffic Records System” (also known as “SWITRS”). Law enforcement agencies from around the state take reports of traffic crashes that occur on California’s state highways and other roadways, and then send the reports to the California Highway Patrol, which enters them into SWITRS.

The SIR is located within an incorporated and unincorporated area of Lassen County. The Susanville Police Department is responsible for investigating traffic crashes that occur in incorporated areas of the City of Susanville including the tribal areas within the city. The California Highway Patrol is responsible for investigating traffic crashes that occur in unincorporated areas of the county.

Based on traffic crash data stored in the SWITRS database there were 125 traffic crashes that occurred within a 1-mile radius of the SIR between January 1, 2011 and December 31, 2022. These crashes resulted in 2 fatalities and involved 7 pedestrian victims.

SafeTREC developed a tribal crash data tool (<https://safetrec.berkeley.edu/programs/tribal-road-safety-program/tribal-crash-data-tool>), which provides California tribes with access to the web-based interactive analysis and mapping for tribal areas (<https://tribaldata.berkeley.edu/>). The source of crash data for this tool is SWITRS. The tool is password protected and has features for mapping and analyses of data related to the tribal areas. The SWITRS data contained in this report was obtained from SafeTREC's Traffic Injuries Mapping System (TIMS) in California Tribal Areas (Tribal Crash Data Tool) which can be accessed at the following link: <https://tribaldata.berkeley.edu/>. This data tool provides tribes with access to a web-based interactive analysis and mapping tool for tribal areas. The tool is password protected and has features for mapping and analyses of data related to the tribal areas.

2.3. STATEWIDE INTEGRATED TRAFFIC RECORDS SYSTEM (SWITRS) STATISTICAL DATA

Based on the Tribal Crash Data Tool, the numbers of crashes that occurred between January 1, 2011 and December 31, 2022, at the following locations within a one-mile radius of the reservation are:

Road	#Crashes
State Route 36	43
State Route 139	14
Main Street	8
Paul Bunyan Rd	4

State Route 139 is the main highway that passes through the Susanville Rancheria.

The 125 traffic crashes resulted in 175 victims being involved, 16 of which resulted in serious injury and two were fatalities. Figure 2.2 shows the crash locations.

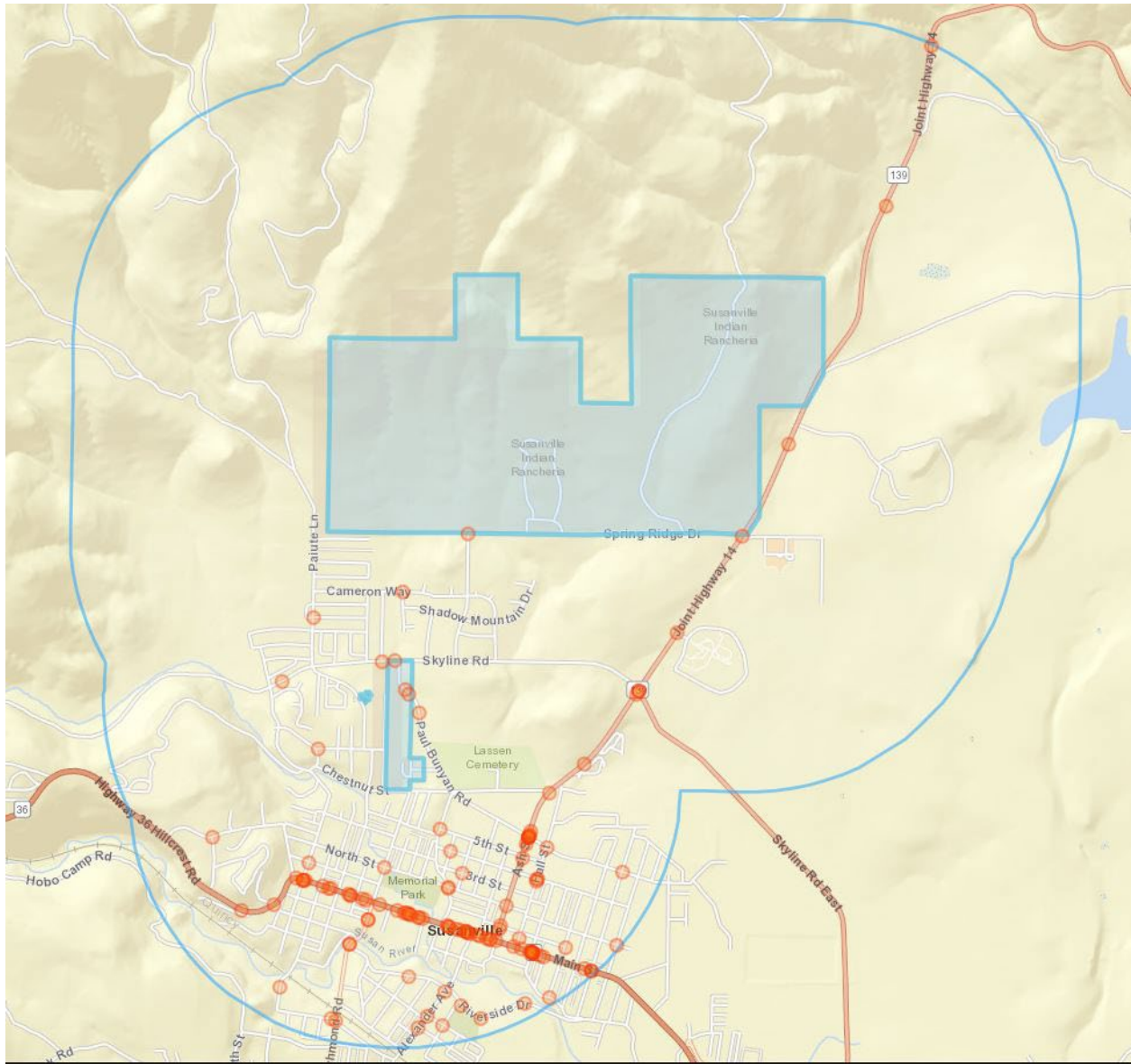


Figure 2-2: Map of Crash Locations within a One Mile Radius of SIR

Traffic Crashes That Produced Serious Injuries

Table 2-1 lists the traffic crashes that produced serious bodily injuries (excluding fatal crashes) that occurred within a 1-mile radius of the Susanville Indian Rancheria between January 1, 2011 and December 31, 2022.

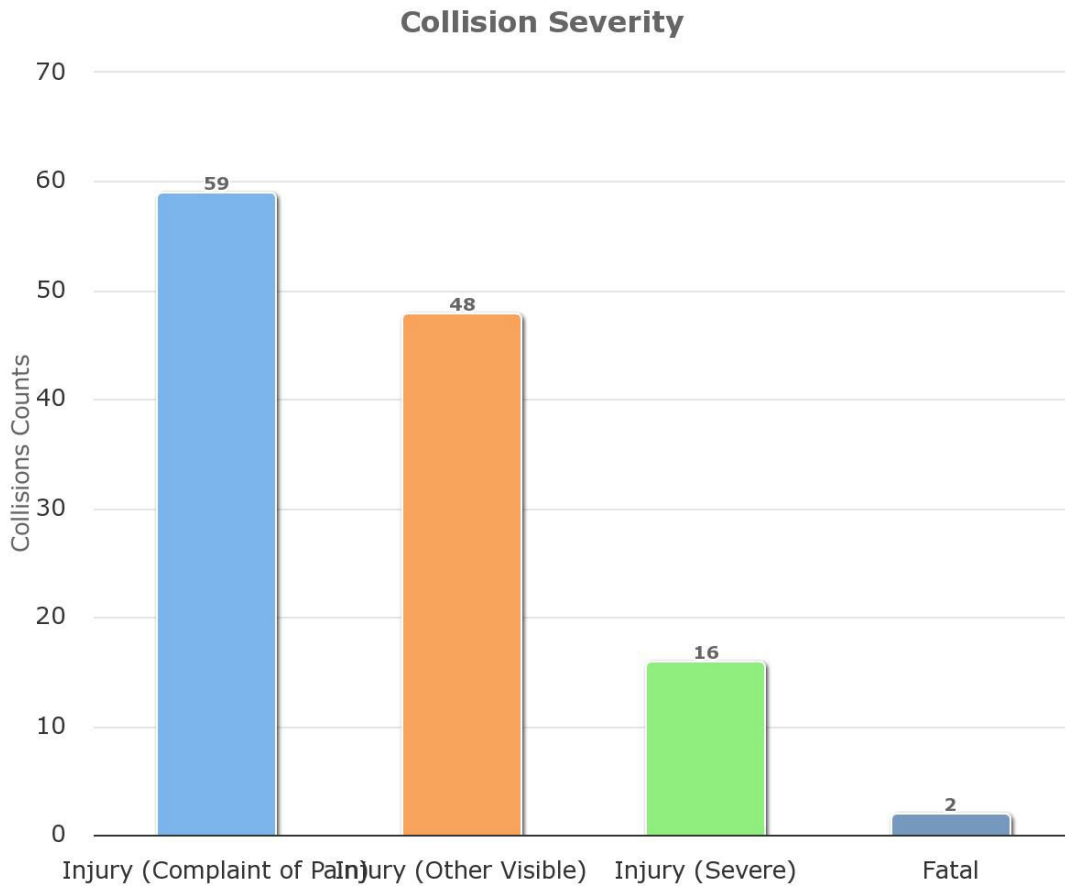


Chart 2-1: Traffic Crashes Resulting in Injury or Death

Table 2-1: Severe Injury Crash Locations and Characteristics

#	Primary Road	Secondary Road	Type	Cause
1	SR 36	6 feet west of Grand Ave	Veh/Ped	Ped fail to yield to Veh
2	SR 36	Pine St	Hit Obj	Unsafe Speed
3	SR 36	120 feet west of Quarry St	Other	Unknown
4	SR 139	Chestnut St	Unknown	No Details
5	Ash St	26 feet south of 1st St	Head-On	Driver Fail to Yield to Ped
6	N. Fairfield Ave	100 feet north of Paul Bunyan St	Veh/Ped	Unsafe Speed
7	Richmond Rd	21 feet north of Railroad Ave	Broadside	Ped Failing to Yield
8	Skyline Ext	1,584 feet north of RT 139	Head-On	Unsafe Turn
9	Skyline Ext	262 east of Cherry Ter	Sideswipe	Unsafe Speed
10	SR 139	10,718 feet south of Spring Ridge Drive	Sideswipe	Unknown
11	Grand Ave	North St	Head-On	Driving Under the Influence
12	Richmond Rd	Riverside Dr	Head-On	Improper Turn
13	River St	S Sacramento St	Other	Unsafe Speed
14	Paul Bunyan St	Skyline Rd	Head-On	Unsafe Lane Change
15	SR 36	SR 36 Milepost #1	Veh/Ped	Pedestrian Violation
16	Paul Bunyan Rd	Paul Bunyan Rd A	Rear End	Driving Under the Influence

Fatal Traffic Crashes

One of the 125 crashes, 2 crashes resulted in fatality (see Table 2.2 for details).

Table 2-2: Fatal Crashes within a 1-Mile Radius of Susanville Indian Rancheria

#	Location	Date	Day	Time	Type	PCF
1	RT 36 (291 feet west of) Pacific St	6-5-2013	Wed	19:57	Auto/Ped	Driver Failure to Yield to Pedestrian
2	RT 36 (30 feet west of) S. McDow St.	1-17-2020	Fri	20:15	Auto/Ped	Driver Failure to Yield to Pedestrian

The traffic crashes were spread out through the week. The highest numbers occurred on Thursdays (27), and the lowest on Sundays (9). Please refer to Chart 2-2 for details.

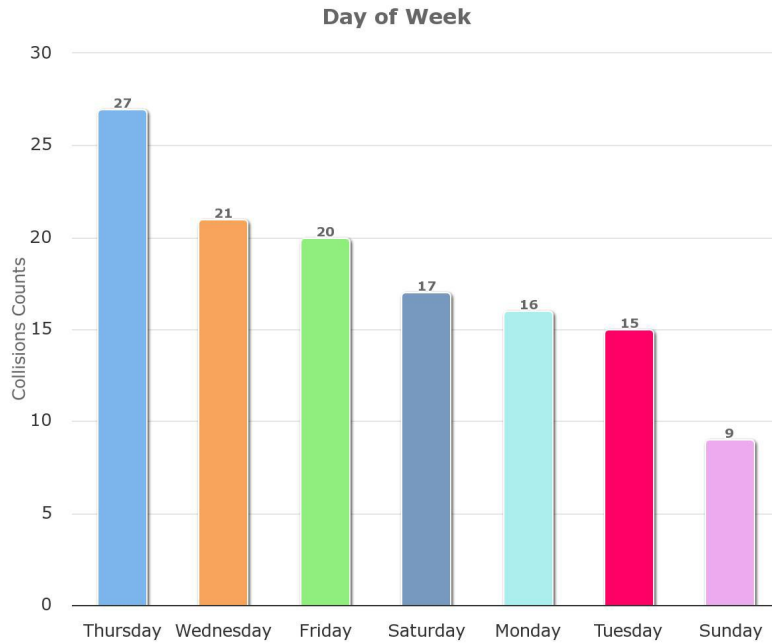


Chart 2-2: Traffic Crashes by Day of Week

Chart 2-3 lists the hours of the day that the 125 crashes occurred. The peak period was between 12:00 p.m. and 1:00 p.m.

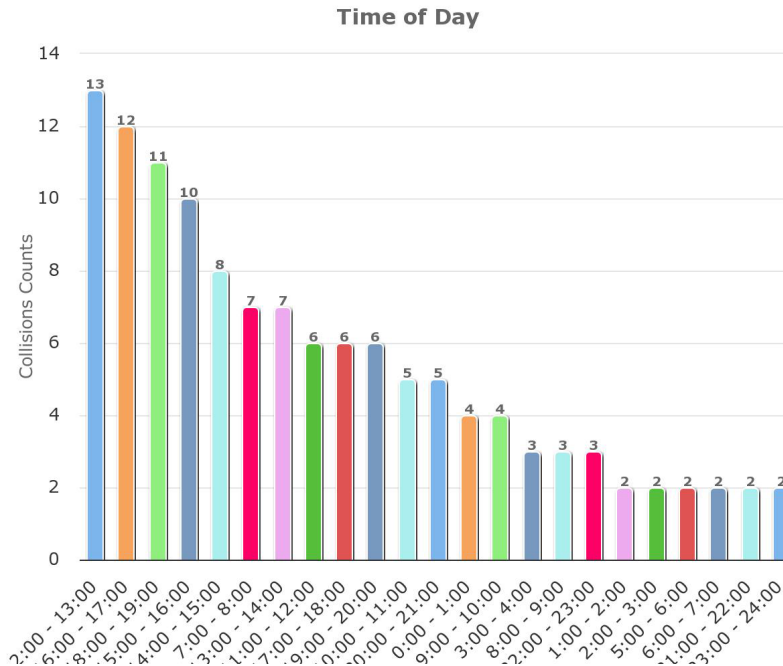


Chart 2-3: Traffic Crashes by Hour of the Day

Chart 2-4 illustrates the type of crashes that occurred near the Susanville Indian Rancheria. Broadside crashes were the most prevalent type of crash followed by rear-end crashes.

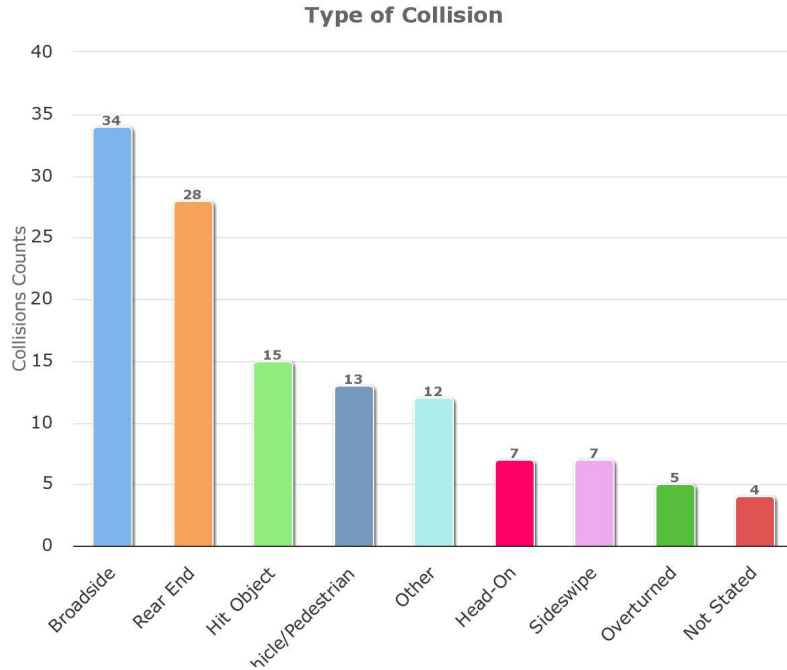


Chart 2-4: Traffic Crashes by Type

Chart 2-5 shows what the involved vehicles collided with (other motor vehicles, pedestrian, fixed object, etc.). Most of the 64 crashes involved two or more vehicles colliding with each other.

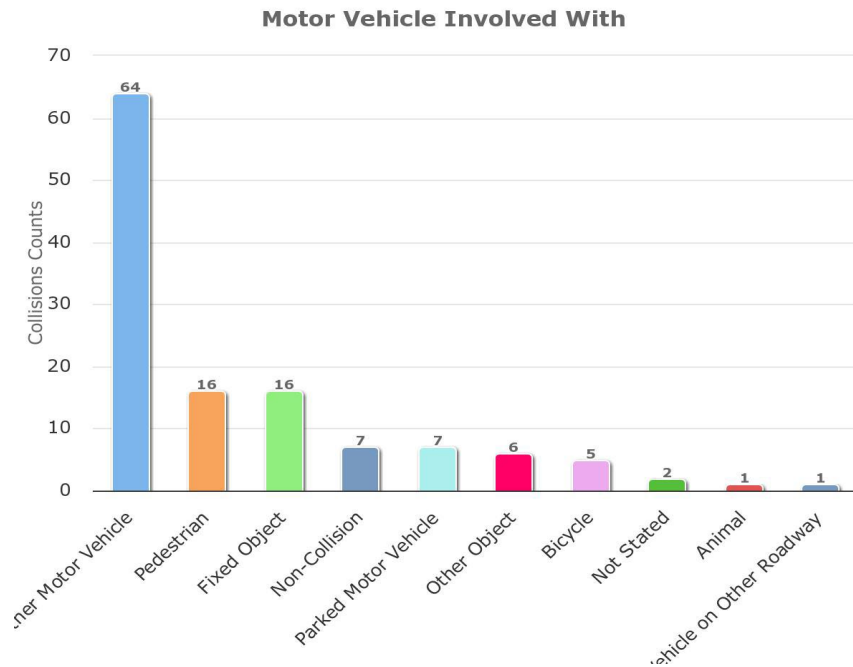


Chart 2-5: Item With Which Motor Vehicle Collided

2.4. PRIMARY CRASH FACTORS

Police officers who investigate a traffic crash attempt to discover the by interviewing involved parties and witnesses, and examining the physical evidence at the scene. When an officer concludes that a driver has committed a traffic violation that was the proximate cause, it is known as the Primary Crash Factor (PCF).

Table 2=3 shows the PCFs of all 125 crashes within a one-mile radius of the Susanville Indian Rancheria for January 1, 2011 to December 31, 2022. The leading cause (24%) was determined to be speeding, a violation of section 22350 of the California Vehicle Code.

Table 2-3: Causes of Crashes within a 1-Mile Radius of the Susanville Indian Rancheria January 1, 2011, and December 31, 2022

Primary Crash Factors		
Vehicle Code Section	Crashes	Percentage
22350 Speeding	30	24.0%
21804 (a) Failure to yield from a driveway or alley	9	7.2%
23152(a) DUI	9	7.2%
21703 Follow too closely	7	5.6%
21950 (a) Driver fail to yield to ped	6	4.8%
22107 Unsafe turning movement	6	4.8%
21802(a) Failure to yield to through traffic from a stop sign	6	4.8%
21954(a) Ped failing to yield to vehicle	6	4.8%
21650 Failure to drive on right side of roadway	5	4.0%
22106 Unsafe start	5	4.0%
22450 Stop sign	4	3.2%
21801(a) Left turn failing to yield	4	3.2%
21453 Red signal	3	2.4%
21658 Unsafe passing	3	2.4%
21456 Yield right-of-way ped in Crosswalk	2	1.6%
23153 DUI with Injury	2	1.6%
21800 Yield right-of-way at intersection	1	0.8%
21803 Driver failing to yield at intersection	1	0.8%
21956	1	0.8%
22658	1	0.8%
No PCF Listed	1	0.8%
Total	125	

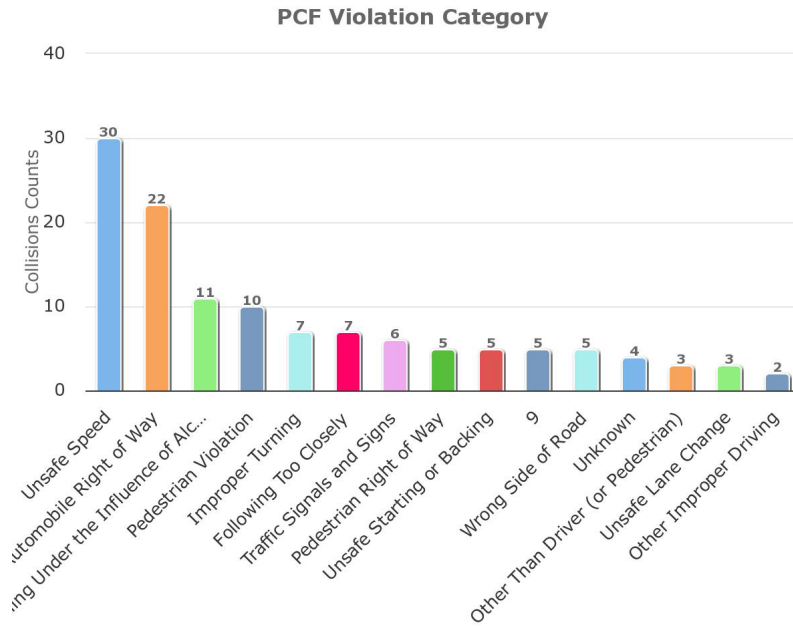


Chart 2-6: Primary Crash Factors near the Susanville Indian Rancheria

The City of Susanville generates approximately 60,000 daily trips, which amounts to approximately 4 daily trips per capita and a VMT of 49.7 VMT per capita. Figure 2=3 shows the total volume of all trips originating from the City of Susanville on a typical weekday each week between June 2021 and June 2023. The data and figures showing the transportation trends within the City of Susanville are derived from Replica, which provides data that represents the population and its travel patterns for the whole country.

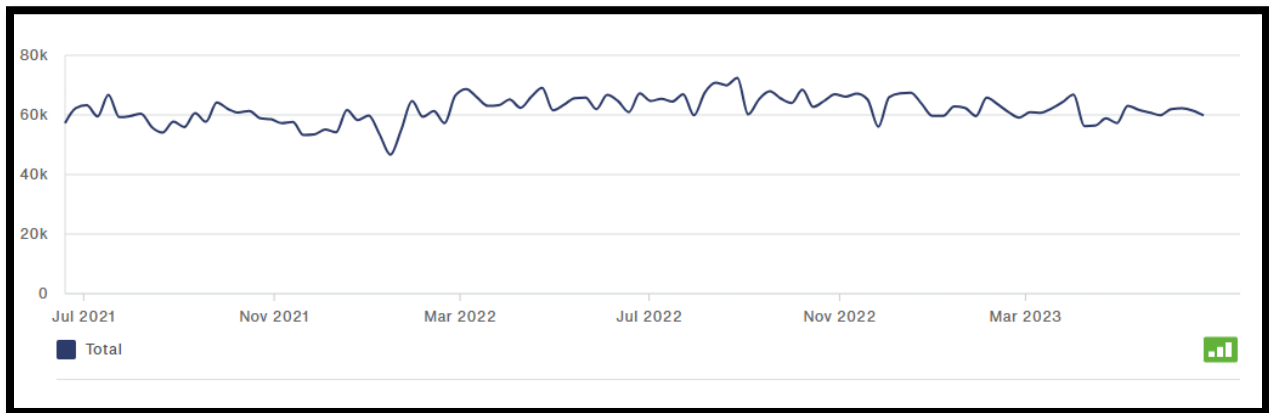


Figure 2-3: Susanville Total Trips

Figure 2.4 shows the modal split for all trips originating from the City of Susanville on a typical weekday in each week between June 2021 and June 2023.

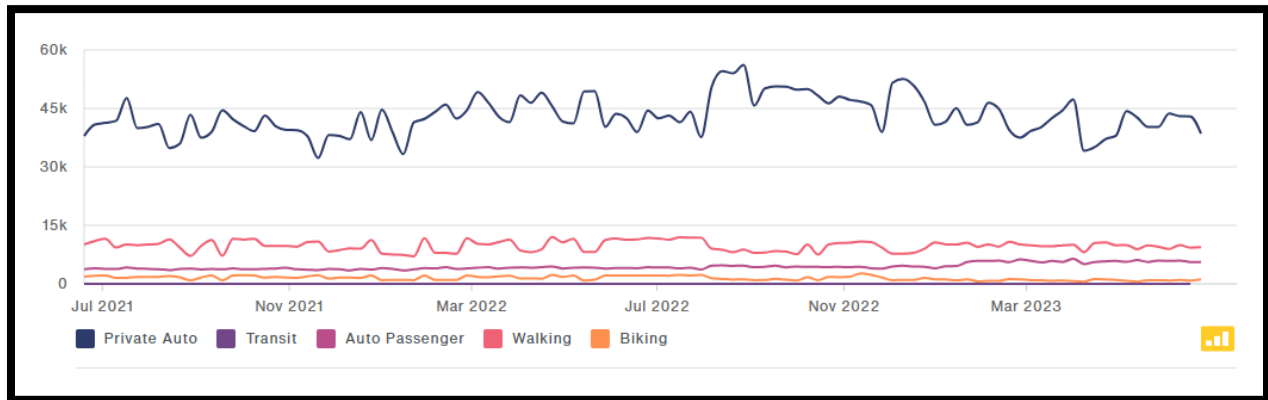


Figure 2-4: Susanville Modal Split

This module shows the proportion of trips originating in the selected geography that begin each hour of the day on a typical weekday in each week.

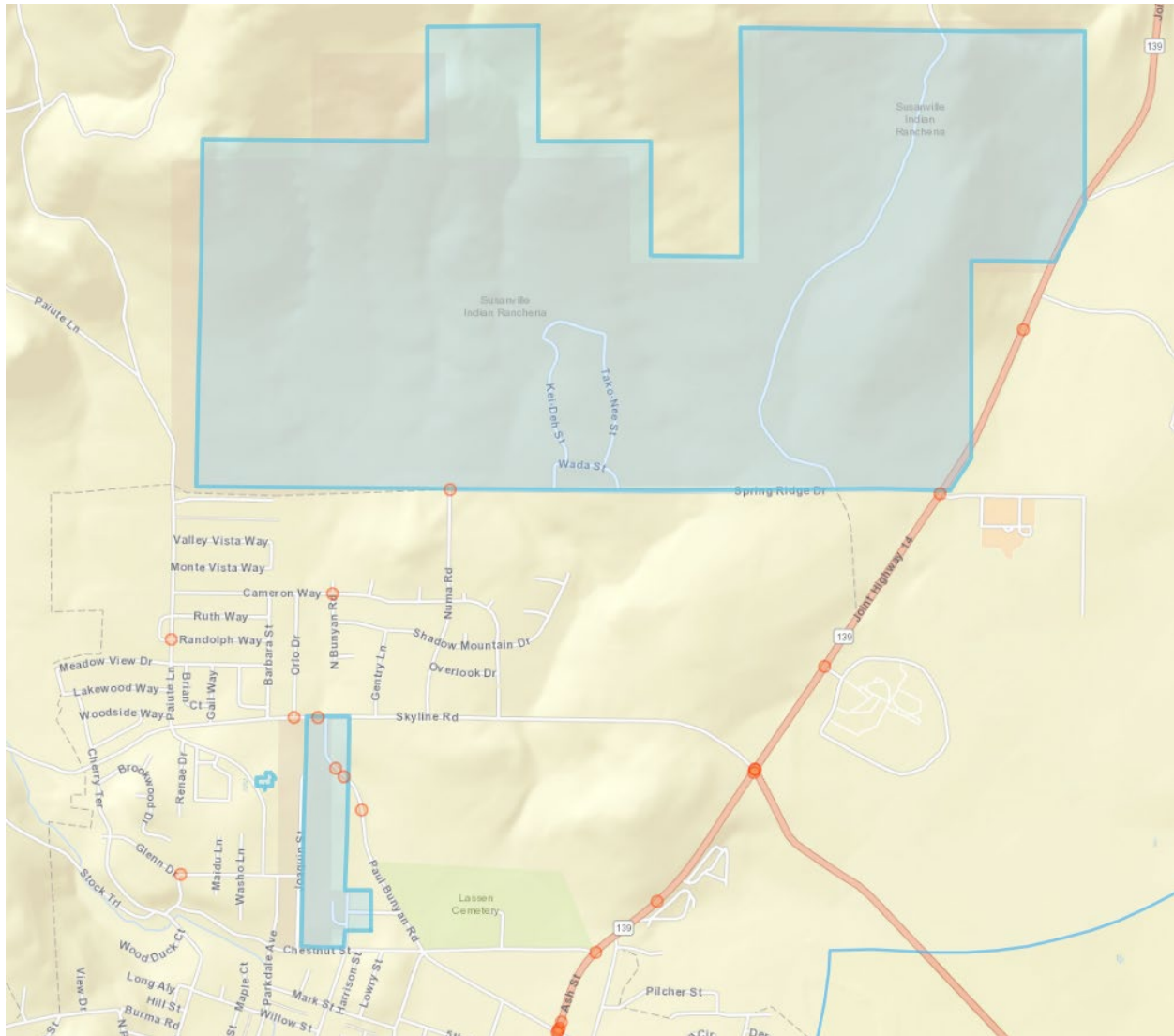
2.5. FOCUS AREA CRASHES

One of the major trip generators within the Susanville Indian Rancheria is the Diamond Mountain Casino which is located south of Skyline Rd. The Rancheria does not have tribal police to collect crash data within the Rancheria's tribal land. The crashes occurring outside the tribal land are reported to the California Highway Patrol (CHP). CHP collects crash data on non-tribal roads and maintains a traffic crash database known as the Statewide Integrated Traffic Records System (SWITRS). Law enforcement agencies from around the state forward traffic crash reports of the crashes occurring on California's state highways and other roadways to CHP, and those reports are then entered into SWITRS by CHP. The traffic crash data presented here are obtained from the SafeTREC's Tribal Crash Data Tool (<https://tribaldata.berkeley.edu/index.php>). The following figures are obtained from this tool and depict the crash data.

The study of the focus areas analyzed crashes that occurred within a one-mile radius of Susanville Indian Rancheria and the four focus areas studied in this assessment are as follows:

1. Joaquin Street Traffic Conditions
2. Spring Ridge Drive and Highway 139 Intersection
3. Spring Ridge Drive Striping and Numa Road Intersection
4. Chestnut and Paul Bunyan Road and Grand Avenue Intersection

The following figure shows the location of the crashes in the Susanville Indian Rancheria in the vicinity of the focus areas during the 10-year period between January 1, 2013 and December 31, 2022. A description of each crash is listed below.



In the north section of the Rancheria:

In 2013, at the intersection of Rt 139 and Spring Ridge Drive a broadside crash occurred resulting in minor injuries.

In 2014 at intersection of Rt. 139 and Spring Ridge Drive a solo crash with a fixed object occurred resulting in injuries.

In 2017 at about 20 feet west of intersection of Spring Ridge Dr. and Numa Road, a solo crash with a fixed object occurred resulting in minor injuries.

In the south section of the Rancheria:

In 2013, 92 feet west of intersection of Skyline Dr. and Paul Bunyan Road a crash occurred that resulted in minor injuries.

In 2013, 764 feet south of intersection of Paul Bunyan Rd. & Skyline Dr. a broadside crash occurred resulting in minor injuries.

In 2016 at vicinity of the intersection of Orlo Drive and Skyline Rd. a rear end crash occurred resulting in minor injuries.

In 2022, 628 feet south of the intersection of Paul Bunyan St. & Skyline Rd., a head-on crash occurred which resulted in severe injuries.

In 2022, 1,200 feet south of intersection of Paul Bunyan Rd. & Skyline Dr. a crash occurred resulting in minor injuries.

UC Berkeley SafeTREC also developed a community engagement tool that allows community members to report and collect information about transportation crashes, near-misses, general hazards and safe locations to travel. Street Story is free to use and publicly accessible. It features a survey where people can record their travel experiences. SafeTREC adapted its Street Story tool for use in and by tribal communities in California (<https://safetrec.berkeley.edu/tribal-street-story>). This tool (<https://streetstory.berkeley.edu/tribal>) allows for the collection of community-generated data on road conditions and transportation safety issues in and near tribal lands.

The traffic crash data presented in this report were not obtained from Street Story, although it is suggested that Susanville Indian Rancheria staff consider utilizing this free tool to collect information from their tribal community for their local transportation needs assessments, transportation safety planning efforts, safety programs, and project proposals.

3. COMMUNITY ENGAGEMENT SURVEY DISCUSSION

3.1. DISCUSSION OF PROCESS

Effective planning to improve transportation safety begins with public input. As part of the Tribal Transportation Safety Assessment (TTSA), a survey was distributed among members of the Susanville Indian Rancheria community to solicit their concerns and suggestions for the safety of motorists, pedestrians, and bicyclists on and around their tribal lands, as well as the existing conditions of roads and infrastructure facilities. In this chapter, the results of the survey and concerns of the community are summarized. This survey was an opportunity for the community to be heard and to provide feedback about pedestrian, bicycling, and transit facilities and transportation safety issues in and around their community.

The community engagement survey was developed via an online platform, Qualtrics. The survey respondents input their responses directly into the Qualtrics online survey, and their responses were forwarded to SafeTREC electronically. For tribal community members who did not have access to the internet, we suggested the tribal government staff make prints of the survey to mail to them. All responses remained completely anonymous and were used only for this safety assessment project. The survey responses may contribute to the success of the tribe's future applications for funding to implement improvements.

We received three online responses from the Susanville Indian Rancheria community. The following are the questions asked in the survey:

1. *Do you live on Tribal property?*

2. *On a scale of 1 through 5, how would you rank the following safety concerns (1 = most concern, 5 = least concern)? Pedestrian Walkways and Sidewalks, Bike Paths and Bike Lanes, Transit Services, Traffic Crashes, Emergency Services*

3&4. *What are the travel destinations within and outside your tribal land: Housing, School, Cultural/Historic Monuments, Recreational Use, Shopping Center, Businesses, Including Tribally-Owned Businesses, Medical, Appointments, Prescription Pickup, Work, and Entertainment facility?*

5. *Do you know of specific locations where crashes have occurred? If so, please list the location, severity of the crash, an approximate date if you know it, and if the crash was reported to CHP or any other enforcement agency.*

6. *Please list the specific locations in your tribal land that you believe need improvement for walking, biking, traveling in a wheelchair, or transit. Please list the safety issues you are concerned about for each location listed above. Please indicate what, from the following list, you would suggest for improvement to make it feel safer: Slower speeds, better or more sidewalks, better or more bike lanes or pathways, fewer cracks in the pavements, more lighting, more stop signs and/or signals, better or more crosswalks, more places for people to sit or rest (ex. benches), education for road users on how to use the road safely, more enforcement, community events that encourage walking and biking.*

7. *Is there any transit available within or accessing your community Are there any improvements needed to the transit system? If yes, what do you think is needed?*

8. *Is there any school bus available for your community's school children?*

9. *Are there law enforcement and emergency services in your community?*

10. *Have there been delays in receiving emergency services?*

11. *What are some other transportation safety issues or concerns related to vehicular traffic, and pedestrian, bicycle, and transit safety that you wish to be evaluated in your community?*

3.2. DISCUSSION OF RESULTS

Of the three people who replied to the survey, two do not live on the Rancheria property, while one does. In ranking their concerns about the safety issues, such as traffic crashes, bike paths and bike lanes, pedestrian walkways and sidewalks, transit services, and emergency services, the survey results showed that the residents are most concerned about traffic crashes and bike paths/lanes, followed by pedestrian facilities. The transit services and emergency services are the least concerning for the community.

As for the main travel destinations within their tribal land, those include the casino, businesses, and medical appointments. Housing and work were mentioned as secondary travel destinations within the Rancheria. As for the main travel destinations outside their tribal land, they are mainly recreational destinations and a shopping center, followed by housing, school, businesses and medical appointments.

Responding to the question of whether they know of any specific locations where crashes have occurred, there was mention of crashes at Numa and Spring Ridge Drive, and Kei Dah Street, which were reported to law agencies. Regarding the specific locations on the tribal land they believe need improvement for walking and biking, one mentioned the need for more parking at the Eatery; or a door-to-door transit service for the elderly, to "pick up and take home elders wishing to eat and socialize at the Eatery. Some are very frail or have no transportation so they just stay home." It was also mentioned that Paul Bunyan Road has heavy foot traffic but there are no sidewalks or bike paths on this road. One of the main concerns is speeding on residential roads. One suggestion for improvement was to create more places for people to sit or rest, (for example installing benches). There is no transit available to the tribal residents, although there is school bus available for the tribal children. Respondents also mentioned that the response from law enforcement and emergency services is very slow.

4. TRAFFIC ENGINEERING ASSESSMENT & IMPROVEMENT MEASURES

4.1. SETTING

The Susanville Indian Rancheria (SIR) has a total land base of 1,401.74 acres in trust status and 287.62 acres in fee status. The tribal lands are mainly to the west of Hwy 395 and North of State Route 36 (Chestnut Street). As indicated in 2017 Tribal Transportation Safety Plan, “The Susanville Indian Rancheria is committed to reducing the risk of deaths and serious injuries that occur as a result of incidents on our transportation system. At the direction of Jim Mackay, Tribal Administrator, this high-level plan was developed to identify opportunities and activities that, when implemented, will improve transportation safety for the Tribe, its people, and its visitors. This plan also describes a committee that has been established to ensure implementation.”

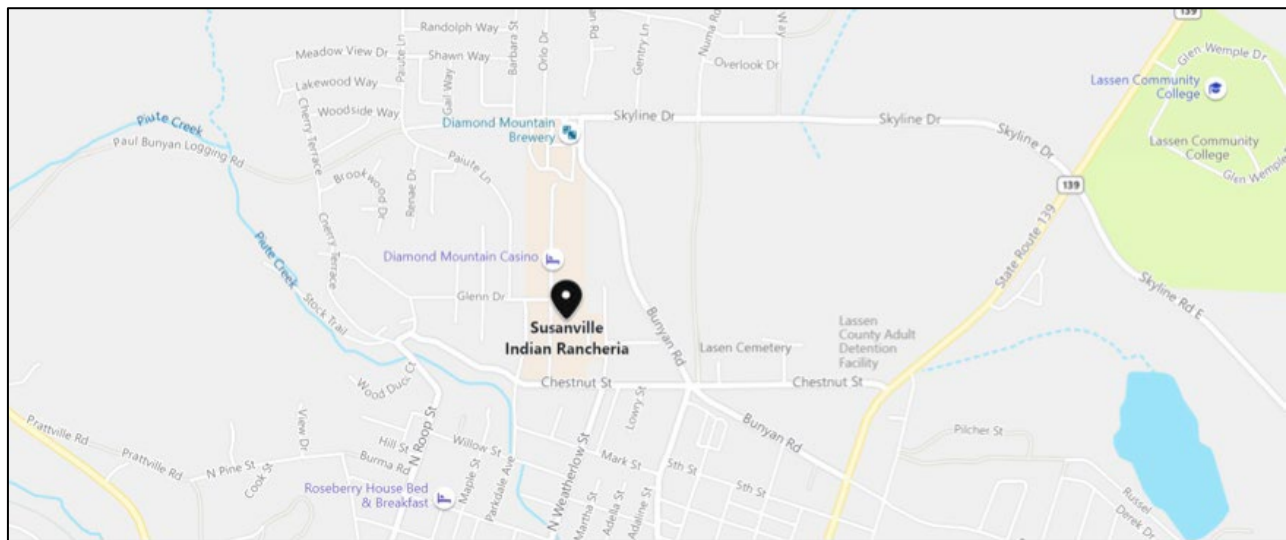


Figure 4-1: Existing Local Road Network

Existing Conditions

Highways and Roads

The tribal lands are connected with streets maintained by several jurisdictions including the State Department of Transportation (Caltrans), the County of Lassen and the City of Susanville.

Most roads leading directly to tribal lands are in excellent condition. Cooperation with adjacent jurisdictions is apparent.

Speeding is a major concern on the part of tribal representatives. The crash history indicates excessive speed is the highest factor causing crashes. This chapter presents observations and suggestions made during the kickoff meeting and field audit conducted on Friday, May 12, 2023.

Suggestions in this chapter are based on best practices and discussions with the participants regarding local needs and feasibility. It should be noted that these suggestions are based on limited field observations and time spent in the City of Susanville by the CSSA evaluators. These

suggestions are intended to guide city staff in making decisions for future safety improvement projects in the city; they may not incorporate all factors relevant to pedestrian and bicycling safety issues in the city. This report is conceptual in nature, and conditions may exist in the focus areas that were not observed and may not be compatible with suggestions presented below. Before finalizing and implementing any physical changes, city staff may choose to conduct more detailed studies or further analysis to refine or discard the suggestions in this report, if they are found to be contextually inappropriate or appear not to improve bicycling or pedestrian safety or accessibility due to conditions including, but not limited to, high vehicular traffic volume or speeds, physical limitations on space or sight distance, or other potential safety concerns.

In describing the existing conditions, we commend the efforts already made toward bringing safety to the entire community through the Strategic Transportation Safety Plan. The plan developed the following emphasis areas and developed strategies to deal with each area:

The selected emphasis areas are copied from the 2017 Tribal Transportation Safety Plan to emphasize the need to continue these programs and goals to promote traffic safety.

EMPHASIS AREA 1 – IMPROVE SIGN AND STRIPING RETROREFLECTIVITY

Description

Faded street signs and faded striping are hazards to drivers in and around Rancheria lands.

Goal

Improve retroreflectivity of signage and striping on roads within Rancheria lands.

Strategies

- Conduct a Road Safety Audit (RSA) that measures retroreflectivity of signs and striping.
- Develop a sign replacement and restriping plan.

EMPHASIS AREA 2 – CRASH REDUCTION AT VARIOUS LOCATIONS WITHIN SUSANVILLE

Description

On SIR and within the 1-mile radius of SIR, five (5) locations that have higher crash incidences compared to the rest of the roads (based on latest data):

- Intersection of SR 139 and Paul Bunyan Rd. - 6 crashes
- Intersection of SR 36 and Alexander Avenue – 5 crashes
- Intersection of SR 36 and Pacific Street – 6 crashes
- Intersections of SR 36 and SR 139 – 3 crashes
- Intersections of SR 36 and McDow Street – 3 crashes

There is tribal concern about speed and failure to obey traffic controls at both intersections. Crash data does not reflect this, therefore, there is a need to ascertain which issues really exist.

Goal

Reduce crashes at these intersections by at least 25% by 2025 (updated from 2021).

Strategies

- Perform Roadway Safety Audits at all 5 intersections.
- Suggest and develop Conceptual Engineering Improvements.

EMPHASIS AREA 3 – IMPROVE SAFETY CULTURE

Description

On SIR roads it is far too common for drivers to:

- Speed (22% of all crashes)
- Drive impaired (5%)
- Fail to yield (27%)

Sadly, these behaviors are accepted as a normal part of the culture. If found to be a factor in the crash, the devastation and severe consequences of these behaviors are reflected in the crash data.

Goal

Reduce fatalities and serious injuries where speed, impairment, and improper turns are factors by at least 25% by 2025 (updated from 2021).

Strategies

- Create a task force to evaluate, refine, and improve laws and policies for traffic enforcement in the community. The task force may specifically evaluate laws and policies concerning the following topics: speeding, impaired driving (alcohol and drugs), failing to yield, driver education, and cross-jurisdictional enforcement.
- Create a media campaign using billboards and displays at the tribe’s casino, Susanville Visitor’s Center and other tribal buildings to encourage drivers to slow down and adopt a culture of safe & sober driving.
- Increase use of sobriety checkpoints for impaired driving enforcement. Implement an educational program for older teens and adults that involves a mock crash, similar to the “Every 15-Minutes” program. (<http://www.everyfifteenminutes.org/>) (Strategy Champion: Fire and Police)

4.2. STUDY LOCATIONS

The focus of the SIR safety assessment comprised the following areas of concern which were identified at the conference call prior to the site visit and at the initial meeting during the site visit:

1. Joaquin Street Traffic Conditions.
 - a. Intersection with Chestnut Line of Sight. In addition, the school bus drop-off on Chestnut east of the intersection limiting sight distance of drivers accessing from Joaquin Street.
 - b. Traffic Calming Signage
 - c. Pedestrian Crossing
2. Spring Ridge Drive and Highway 139 Intersection Evaluation.
 - a. Visibility coming out of Spring Ridge
 - b. Tribal identification along Highway 139
 - c. Intersection advance warning and street name warning
3. Spring Ridge Drive Striping and Numa Road Intersection
 - a. Pedestrian conditions
 - b. Wayfinding Signs
 - c. Signage and stop bars
4. Chestnut and Paul Bunyan Road and Grand Avenue Intersection
 - a. Pedestrian conditions
 - b. Signage and stop bars
 - c. Safe Route for pedestrians to Joaquin Street

Based on the above areas of concern, four focus areas were identified and are discussed in more detail in the following sections of this report.

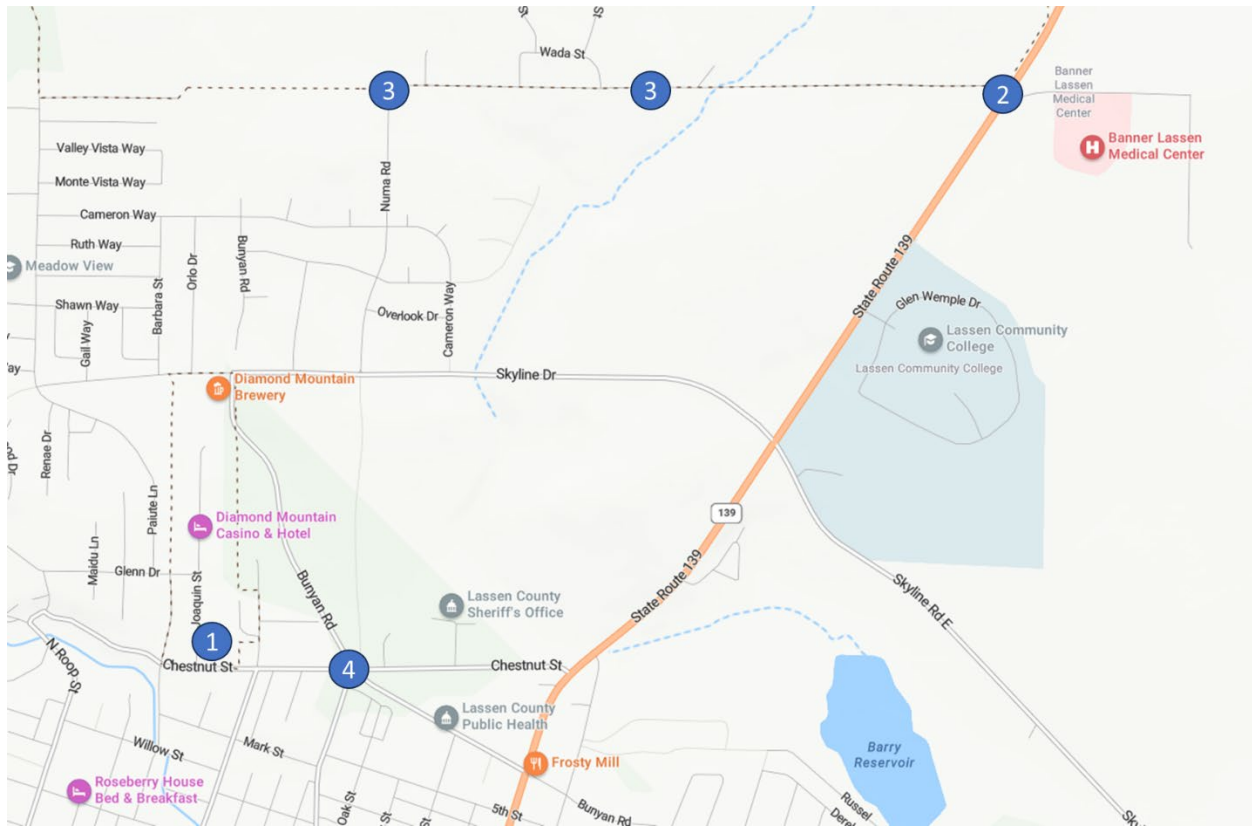


Figure 4-2: Focus Areas

The analysis of these focus areas identified engineering related improvements suggested for the locations with highest crash rates to correct existing crash patterns and reduce the frequency of crashes going forward. Suggested improvements are divided into the following categories:

- Short Term (6-12 months)
- Medium Term (12-24 months)
- Long Term (2-5 years)

4.2.1. FOCUS AREA #1: Joaquin Street Traffic Conditions

Existing Conditions

Joaquin Street serves as a residential collector. It extends from Chestnut Street to the north where it ends at the pedestrian access to Diamond Mountain Casino parking lot. It extends about 0.38 miles, or 1,990 feet, and serves the tribal offices on the east side of the street. It is also designated as a Safe Route to Schools.

The street is 26 feet wide. There is a bus stop pad and shelter on the east side of the street across from Glenn Drive. No parking is allowed on the east side of the street. There are a couple of speed undulations with posted speed of 15 MPH.



Figure 4-3: Joaquin Street Facing North

The line of sight to turn into Chestnut Street from Joaquin Street is very limited, which makes it difficult to see oncoming traffic on Chestnut Street. Some of this is due to the shrubs and vegetations on Chestnut Street near the intersection. In addition, school buses drop children off on the northside of Chestnut Street just east of the intersection, which blocks the line of sight further. Figure 4-4 illustrates the limited sight distance at the intersection of Joaquin Street and Chestnut Street.



Figure 4-4: Southbound Traffic View on Joaquin Street Looking East

Possible Safety Improvements

Consider implementing the following improvements:

Short Term (6-12 months)

- Consider adding signs to share the road with bicycles.
- Work with the city to trim vegetation and shrubs on the southeast corner of the intersection of San Joaquin Street and Chestnut Street.
- Work with the school district to drop off children at the existing bus stop on Joaquin Street, instead of the intersection of Joaquin Street and Chestnut Street. The existing bus stop is located on Joaquin Street at the intersection of Glenn Drive.
- Consider adding crosswalk striping and crosswalk signs at the intersection of San Joaquin Street and Glenn Street connecting the ADA ramp in front of the bus stop to the southwest corner of the intersection.



Medium Term (12-24 months)

- Consider adding Speed Display Signs 200 to 250 feet north of Chestnut Street for northbound traffic and 100 feet south of Glenn Street for southbound traffic.
- Consider installation a 15 MPH speed legend on the asphalt.



Figure 4-5: End of San Joaquin Street, Pedestrian Access to the Casino

4.2.2. FOCUS AREA #2: Spring Ridge Drive and Highway 139 Intersection

Existing Conditions

From a regional perspective, Susanville has two major gateways: Highway 139 from the north and Highway 36 connecting to east and west. Highway 139 ends in Susanville, connecting to Highway 36 as Ash Street. The Hwy 139 / Spring Ridge Drive intersection is the Rancheria's first urban presence to motorists from the north. It is also the gateway to the new tribal housing development north of Spring Ridge. There is no advance signage on Hwy 139 alerting drivers to the intersection and the SIR tribal area ahead.



Figure 4-6: Limited Sight Distance at Spring Ridge Drive Intersection

Turning in and out of Spring Ridge is challenging, mainly due to the high approach speeds north and south on Highway 139. In addition, there is limited sight distance due to the steep grade on SR 139 in the southbound direction toward the intersection.



Figure 4-7: Aerial View of Hwy 139 / Spring Ridge Drive Intersection



Figure 4-8: Intersection of Hwy 139 and Spring Ridge Road Views

Possible Safety Improvements

Consider coordinating with Caltrans and the County on the following improvements:

Short Term (6-12 months)

- Coordinate with Caltrans to install advance intersection warning signs.
- Coordinate with Caltrans to install speed display signs for both approaches on Highway 139.
- Coordinate with Caltrans and the county to study line-of-sight adequacy considering the actual approach speed from the north.

Medium Term (12-24 months)

Tribal communities throughout California use cultural identity signs in combination with speed display signs, intersection warning signs, and advance street name signs to send clear messages to drivers on the highways that they need to slow down. Capturing drivers' attention from all major approaches requires the development of an extensive plan by all stakeholders, especially the jurisdictions maintaining the approaching roadways.

It is suggested to first develop the cultural identity signs and determine the appropriate size considering the speed, exact locations, and the appropriate distance to allow drivers to slow down and be able to make the decision to turn in.

- Tribal community signage may be in advance of the immediate intersection.
- The next step is to coordinate with Caltrans on the installation of the warning and regulatory signs in harmony with the cultural signs.



Figure 4-9: Example of Effective Cultural Identity Sign

The City of Susanville, Caltrans and SIR are already coordinating efforts to put in a sign for Highway 36. A similar effort may be coordinated to install cultural signs on Highway 139.

Long Term (2-5 years)

- Implement the signage systems from all approaches according to the developed plan, using solar powered speed display sign or similar.
- Work with Caltrans to implement acceleration and deceleration lanes on SR 139 at the intersection of Spring Ridge Drive.



4.2.3. FOCUS AREA #3: Spring Ridge Drive Signing and Numa Road Intersection

Existing Conditions

Due to the rural nature of the area, drivers travelling west from 139 on Spring Ridge Drive do not have any indication of the proximity of their destination. Even as drivers get close to the tribal residential street intersections, there is no signage to alert them to the side streets.

The roadway condition is excellent and the road is delineated with a double yellow centerline and white edge lines. The centerline of Spring Ridge Drive does not have reflectors. The posted speed limit is 45 MPH just west of SR 139 and then reduces to 35 MPH further west prior to approaching Wada Street. Spring Ridge Drive has rumble strips in the eastbound direction approaching SR 139 to slow drivers before the stop sign. Rumble strips are also installed in both approaches to the stop-controlled intersection of Spring Ridge Drive and Wada Street.



Figure 4-10: Spring Ridge Drive Looking West

Possible Safety Improvements

Consider coordinating with Lassen County for implementing the following improvements, or with their approval through an encroachment permit:

Short Term (6-12 months)

- Wayfinding signs with distances to the casino.
- Installation of centerline reflectors.
- Advance signing for the intersection with Numa Road. An example could be “Road Ends 300 feet” and a Type N marker at the end of the road.
- Install rumble strips on Spring Ridge Drive in the westbound direction approaching Numa Road. Also, rumble strips on Numa Road in the northbound direction approaching Spring Ridge Drive.

- There are no streetlights at the intersection of Spring Ridge Drive and Numa Road. Adding streetlights at the intersection will improve visibility of the intersection and improve intersection safety.



Figure 4-11: Spring Ridge Drive end at Numa Road Intersection

4.2.4. FOCUS AREA #4: Chestnut / Paul Bunyan / Grand Avenue Intersection

Existing Conditions

Chestnut Road is a major east-west collector street in the City of Susanville. The intersection of Chestnut with Paul Bunyan Road and Grand Avenue is a five-legged intersection controlled by stop signs for all directions. The central location of this intersection draws pedestrians' activities with no pedestrian facilities at the intersection.

The pedestrian traffic from the Rancheria needs to cross Chestnut Street, but the availability of safe pedestrian crossing is limited. Also, the majority of Chestnut Street has no sidewalks.

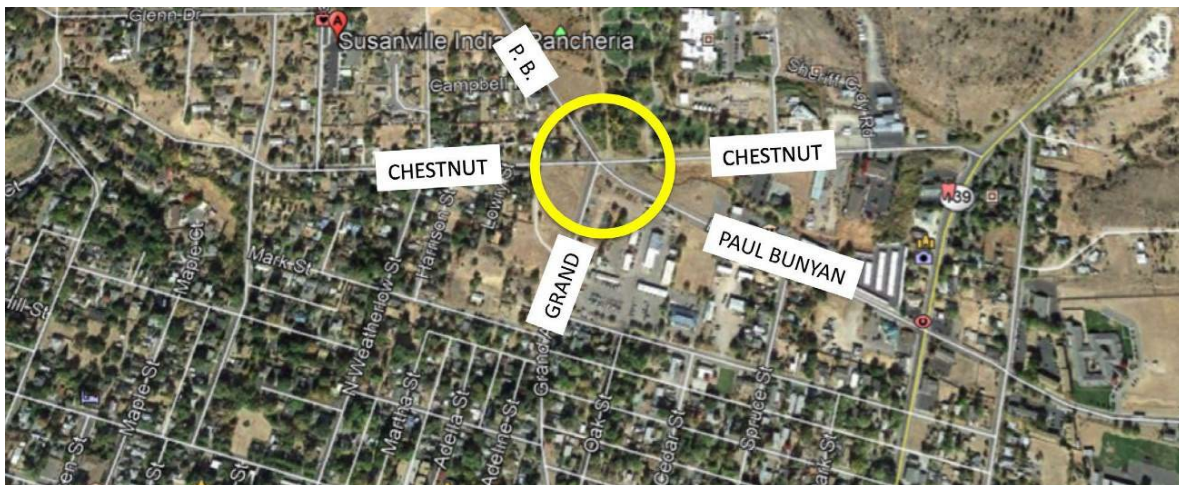


Figure 4-12: Chestnut / Paul Bunyan / Grand Intersection Overview

Possible Safety Improvements

Consider coordinating with City of Susanville to apply for grants (see Table 3.1) to implement the following improvements:

Short Term (6-12 months)

- Redesign the pedestrian circulation within the intersection. Crosswalk markings are worn out and need to be restriped.
- Refresh all striping and ensure reflectivity and mounting heights of all stop signs.

Medium Term (12-24 months)

- Begin the discussion with the City of Susanville to design the intersection to accommodate pedestrians and bicyclists. Consider a roundabout at this intersection, which will reduce traffic speed at the intersection and improve traffic flow through the intersection.

Long Term (2-5 Years)

- Construct sidewalks on Chestnut from Joaquin Street to Grand Avenue.
- Widen the road to accommodate bicycle lanes.

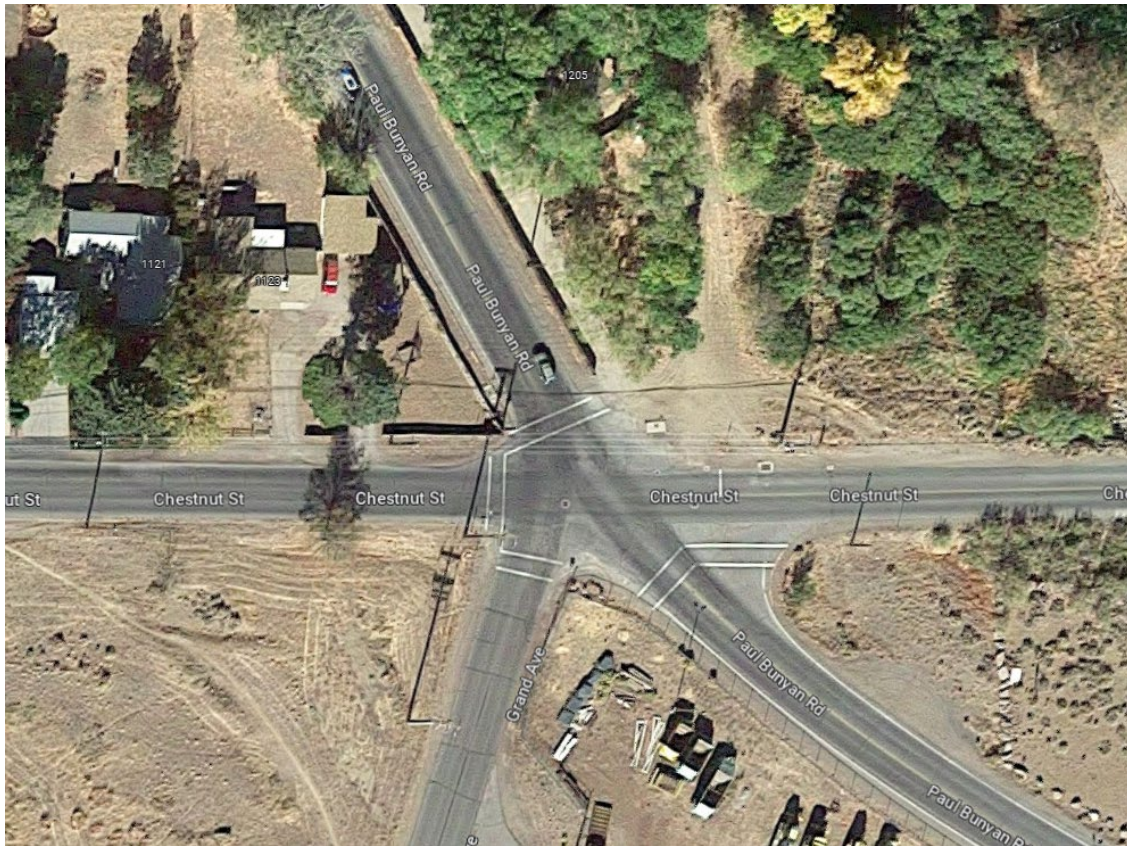


Figure 4-13: Chestnut / Paul Bunyan / Grand Avenue intersection detail

4.3. ENFORCEMENT MEASURES

Traffic Enforcement Capabilities

The Susanville Indian Rancheria does not have a tribal police department. The CHP is responsible for investigating and documenting traffic crashes that occur in and around the reservation.

The CHP Susanville Office (located in Susanville, California) is responsible for patrolling the area around the unincorporated area of the Susanville Indian Rancheria. Sergeant Nolta is assigned to the Susanville CHP office. She said there are a total of 22 uniformed officers assigned to the Susanville CHP office, (14 officers, 1 captain, 4 sergeants, and 3 resident CHP officers). Sergeant Nolta is very familiar with the Susanville Indian Rancheria and said they have been called to provide traffic crash investigative services in and around the Susanville Indian Rancheria on several occasions. Sergeant Nolta said the CHP investigates the cause of all the traffic crashes they are summoned to, unless it is a “property damage only” crash and the involved parties desire to only exchange information in lieu of a traffic crash report. There is no MOU between the CHP and the Susanville Indian Rancheria to investigate traffic crashes or provide traffic enforcement.

The Susanville Police Department is responsible for patrolling the area within the incorporated area of the Susanville Rancheria. The Susanville Police Department investigates the cause of all the traffic crashes they are summoned to, unless it is a property damage only crash and the involved parties desire to only exchange information in lieu of a traffic crash report.

Records Management System (RMS)

The CHP inputs all of their traffic crash reports into SWITRS.

Leading Causes of Crashes

The leading cause of traffic crashes within a 1-mile radius of the Susanville Rancheria was unsafe speed (22350 C.V.C.), accounting for approximately 24.07% of the crashes. Strategies to reduce speeding could include:

- Enhanced traffic enforcement, targeting excessive speed.
- Deploying radar signs and or radar trailers.
 - Ensuring that radar speed surveys are valid and up to date.
 - Public education.

Possible Improvements for Traffic Safety

- Regularly meet with officials of the CHP, Susanville Police Department and Lassen County Sheriff's Department. Discuss traffic safety issues and tribal concerns with law enforcement officers. If extra patrol is desired because of recurring unsafe driving behaviors, ask for specialized traffic enforcement.
- Consider adopting an MOU with CHP and Susanville Police Department to provide traffic enforcement and crash investigation resources.
- Search for additional grant funding that may exist to pay for specialized traffic enforcement, traffic safety equipment (radar trailers or changeable message boards) and traffic safety education.
- Consider implementing a traffic safety program. The program may reach out to reservation residents and disseminate traffic safety literature. This could be done at a traffic safety fair.
- Keep abreast of current and past traffic crash statistics by regularly accessing <https://tribaldata.berkeley.edu/>

Consider utilizing the Street Story tool, developed by SafeTREC. It is a community engagement tool that allows communities to enter and collect information about transportation crashes, near misses, general hazards and safe locations to travel. More information can be obtained at <https://safetrec.berkeley.edu/tools/street-story-platform-community-engagement>

Berkeley Safe Transportation Research and Education Center

SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

(SAFETREC)

UNIVERSITY OF CALIFORNIA, BERKELEY

About the Safe Transportation Research and Education Center (SafeTREC)

Founded in 2000, SafeTREC is part of the University of California, Berkeley, affiliated with the School of Public Health and the Institute of Transportation Studies, with additional partnerships with the Department of City and Regional Planning, Public Policy, and Transportation Engineering.

Our Mission

SafeTREC's mission is to inform decision-making and empower communities to improve roadway safety for all.

Our Vision

We envision a world with zero roadway fatalities or serious injuries and a culture that prioritizes safe mobility.

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