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DATE: June 6, 2023

TO: Honorable Mayor and Members of the City Council

FROM: Travis Sanborn, Management Analyst

THROUGH: Kyle Knopp, City Manager

SUBJECT: Local Roadway Safety Plan Draft Report

IT IS RECOMMENDED THAT THE CITY COUNCIL:

Receive the Local Roadway Safety Plan (LRSP) draft report and provide staff with feedback, if any.

BACKGROUND:

Federal regulations require that each state have a Strategic Highway Safety Plan (SHSP). An SHSP is a statewide data-driven traffic safety plan that coordinates the efforts of a wide range of organizations to reduce traffic accident fatalities and serious injuries on all public roads. In coordination with federal, state, local, and private sector safety stakeholders, the SHSP establishes goals, objectives, and emphasis (or challenge) areas. The SHSP addresses the 5 Es of traffic safety: Engineering, Enforcement, Emerging Technologies, Education, and Emergency Response.

A Local Roadway Safety Plan (LRSP) attempts to establish goals, objectives, and emphasis areas in a similar manner for local conditions. An LRSP provides a framework for organizing stakeholders to identify, analyze, and prioritize roadway safety improvements on local and rural roads while contributing to the success of the SHSP. The process of developing an LRSP can be tailored to local protocols, needs, and issues.

The process of preparing an LRSP creates a framework to systematically identify and analyze safety problems and recommend safety improvements. Preparing an LRSP facilitates the development of local agency partnerships and collaboration, resulting in a prioritized list of improvements and actions that can demonstrate a defined need and contribute to the statewide plan. An LRSP offers a proactive approach to addressing safety needs and demonstrates agency responsiveness to safety challenges.

An LRSP is a requirement for Rio Dell to be eligible to apply for federal funds, such as the Highway Safety Improvement Program (HSIP) Cycle 11. In 2019 and 2020 the California Transportation Commission (CTC) allocated \$10 million and \$8 million respectively for the purpose of assisting local agencies in developing their LRSPs.

As of September 14th, 2021, a list of funded projects for developing a Local Roadway Safety Plan funding was made available by the state for agencies to prepare an LRSP. The City of Rio Dell was notified and awarded up to \$19,620 in funding with a minimum of \$2,180 of the required match for the preparation of an LRSP (LRSP ID: LRSP188). On January 26, 2022, a Project Supplemental Agreement was executed with the California Department of Transportation (CalTrans).

DISCUSSION:

Development of Rio Dell's LRSP included data-driven analysis of the City's safety issues supported by feedback from key stakeholders knowledgeable in some aspect of the 5 Es. In preparing the LRSP, city staff analyzed historical collision data, identified potential roadway hazards related to the collisions, received stakeholder feedback, recommended safety improvements, demonstrated the City's responsiveness to safety challenges, and offered a proactive approach to addressing roadway safety needs for the entire transportation network.

Stakeholder feedback was critical in the preparation of the LRSP. City staff engaged the community for feedback through a project website accessible through the City's website. A survey was made available for Rio Dell residents and stakeholders alike to provide input on the City of Rio Dell website.

It is the staff's recommendation that the City Council receive the Local Roadway Safety Plan (LRSP) draft report and provide staff with feedback, if any.

ATTACHMENTS:

Local Roadway Safety Plan Draft Report



City of Rio Dell

Local Road Safety Plan

Draft Report

June 2023



Acknowledgments

This Local Road Safety Plan was made possible with the help of the following Safety Partners:



City of Rio Dell

Mayor and City Council Members

Rio Dell Department of Public Works

Rio Dell Police Department



Rio Dell Volunteer Fire Department

Rio Dell School District

Caltrans, District 1

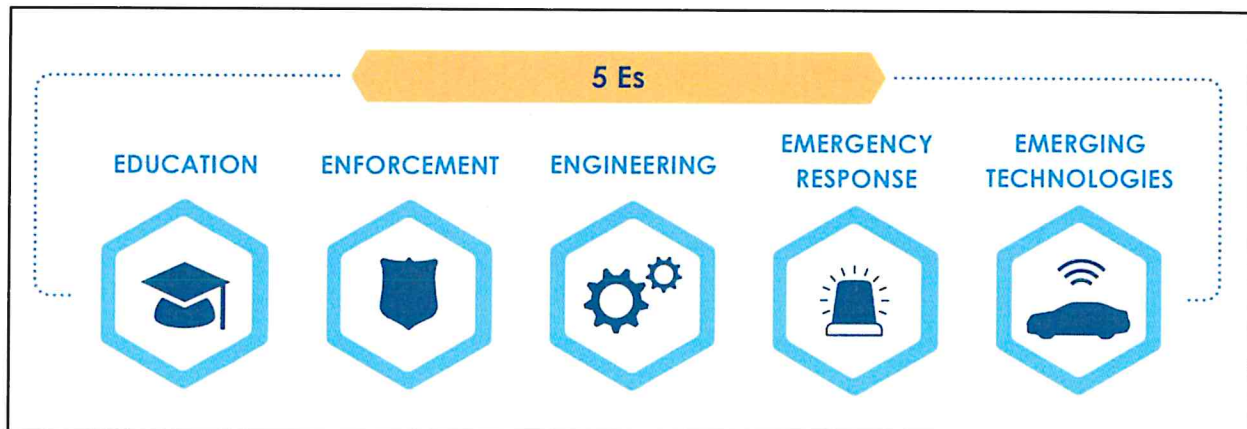


Executive Summary

The City of Rio Dell was awarded a state grant through the California Department of Transportation (Caltrans) to conduct a Local Road Safety Plan (LRSP). Implementing an LRSP is a requirement for agencies to apply for the current Caltrans Highway Safety Improvement Program (HSIP) Cycle 11 funds released in the Spring of 2022.

Federal regulations now require that each state conduct a Strategic Highway Safety Plan (SHSP) which is a data-driven traffic safety plan that coordinates the efforts of a wide range of organizations to reduce traffic accident fatalities and injuries on all public roads. The LRSP attempts to establish goals, objectives, and emphasis areas similarly for local roadways. An LRSP provides a framework for organizing stakeholders to identify, analyze, and prioritize roadway safety improvements on local roads while contributing to the success of the wider SHSP.

The LRSP is a collaborative process amongst an established local leadership group that characterizes the 5 E's of traffic safety. The 5 E's of traffic safety comprise Education, Enforcement, Engineering, Emergency Response, and Emerging Technologies.



By employing a systemic analysis, the City was able to leverage a proactive safety approach that focuses on evaluating an entire roadway network, using a defined set of criteria that is reliant on the context of the issue, rather than raw numbers alone.

Using 6 years of collision data, along with the feedback of various stakeholders involved in the data-gathering process, this LRSP will address multiple SHSP Challenge Areas including but not limited to:

- *Speed Management / Aggressive Driving*
- *Intersections*
- *Impaired Driving*
- *Pedestrians*
- *Bicyclists*

A vision statement and goals were established and used to guide the development of the LRSP. This is considered a living document that can be updated or modernized at any time.

Based on records from Rio Dell's Annual Traffic Accident Report from 2016-2021 and available collision data from California Highway Patrol's Statewide Integrated Traffic Records System and the Transportation Injury Mapping System, along with stakeholder input, the LRSP determined priority locations in the City. These locations, along with the proposed countermeasures, are listed in the tables contained in this report.

The LRSP is a prerequisite to applying for funding opportunities for the proposed countermeasures through HSIP Cycle 11. Proposed countermeasures can seek additional funding opportunities through, but not limited to:

- Active Transportation Program (ATP)
- Congestion Mitigation and Air Quality (CMAQ) program
- Sustainable Transportation Planning Grant
- Stimulus funding
- Capital Improvement Projects

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Introduction

The development of a Local Road Safety Plan (LRSP) is a data-driven traffic safety plan that coordinates the efforts of a wide range of organizations to reduce traffic accident fatalities and injuries on all public roads. By establishing goals, objectives, and emphasis areas, the LRSP provides a framework for organizing stakeholders to identify, analyze, and prioritize roadway safety improvements on local roads while contributing to the success of the Strategic Highway Safety Plan (SHSP) (**Figure 1.1**). A complete LRSP is a requirement to be eligible to apply for funding through the Highway Safety Improvement Program (HSIP) Cycle 11.



Figure 1.1 California SHSP (2020-2024)

This LRSP was created with a focus on the 5 E's of Traffic Safety (**Figure 1.2**) following the Federal Highway Administration's (FHWA) Local Road Safety Plan development process in the six steps as displayed below. (**Figure 1.3**)

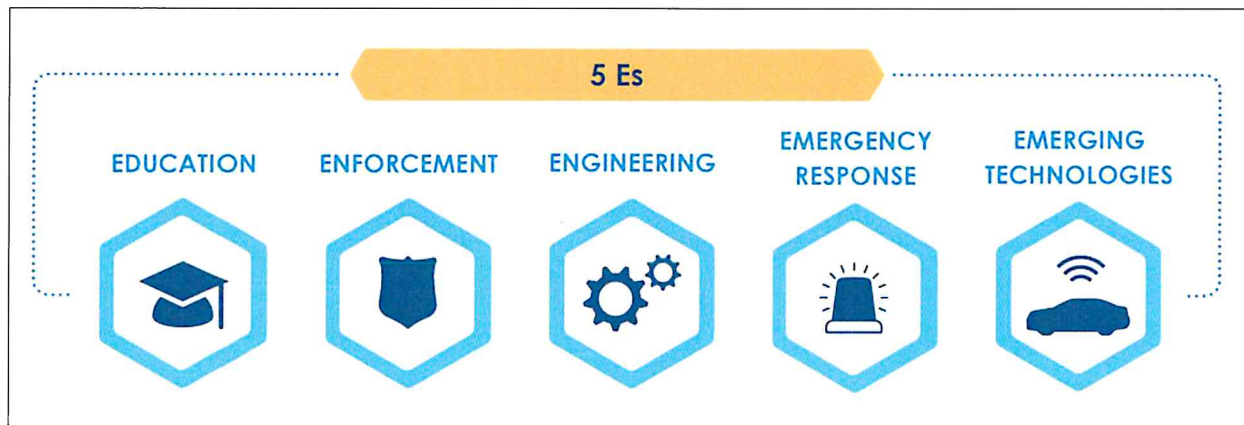


Figure 1.2 5 E's of Traffic Safety



Figure 1.3 FHWA LRSP Development Process

A Safety Champion was established by City staff and feedback was gathered from stakeholders that represented components of the 5E's of Traffic Safety. Public and stakeholder feedback was paramount in establishing a dynamic and inclusive report that allowed leadership to better understand our roads and develop areas of emphasis.

Background

Purpose

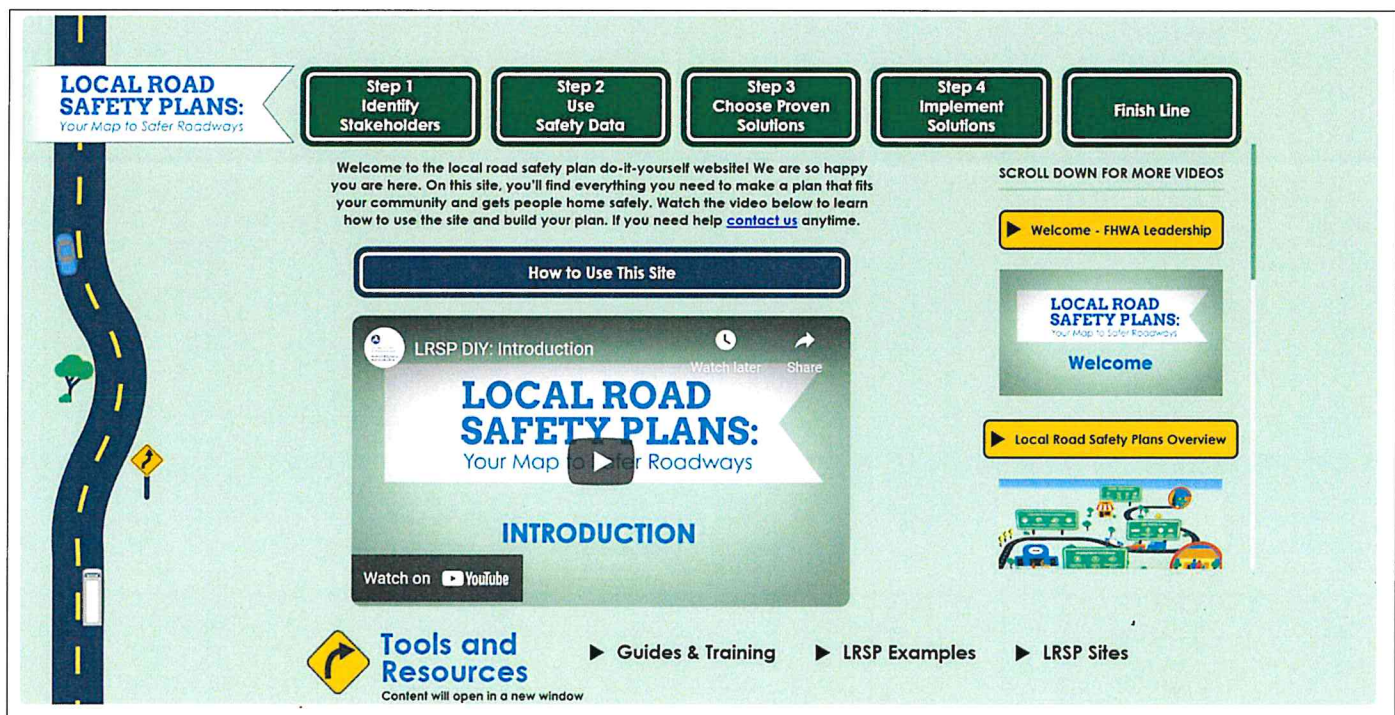
The City of Rio Dell is a small community of approximately 3400 residents in the heart of Humboldt County, California. Rio Dell is known as a bedroom community with a mix of local, commuter, and commercial traffic. The City of Rio Dell aligns with the LRSP aspiration towards zero fatalities and injuries with the Safe-System approach; focusing on safe vehicles, speeds, road users and designs, and post-crash care. The City of Rio Dell is committed to modernizing identified problematic areas on local roadways through proposed countermeasures that have the opportunity to be funded through HSIP Cycle 11 funds.

Standards & Guidelines

The City of Rio Dell's LRSP was created with the guidance of the following standards and guidelines:

- "A General Guide for Implementing The Local Roadway Safety Plan (LRSP)", Caltrans, Updated 5/5/2022
 - "California Safe Roads Implementation Plan for 2020-2024 Strategic Highway Safety Plan", Caltrans, Effective March 2021
 - "Local Road Safety Plans", Federal Highway Administration, Updated January 26, 2021
- (Figure 1.4

Figure 1.4 FHA LRSP DIY Guide



California Strategic Highway Safety Plan

California's SHSP 2020-2024 is composed of 16 Challenge Areas that are key factors associated with fatal and serious injury crashes. These Challenge Areas have been categorized as either High Priority Areas or Focus Areas. **(Figure 1.5)** Using six years of collision data, along with the feedback of various stakeholders involved in the data-gathering process, this LRSP will address multiple SHSP Challenge Areas.

HIGH PRIORITY AREAS

- » Lane Departures (45%)
- » Speed Management / Aggressive Driving (34%)
- » Impaired Driving (28%)
- » Active Transportation (24%):
 - Pedestrians (17%)
 - Bicyclists (7%)
- » Intersections (23%)

FOCUS AREAS

- » Motorcyclists (19%)
- » Young Drivers (14%)
- » Aging Drivers (13%)
- » Occupant Protection (13%)
- » Commercial Vehicles (7%)
- » Driver Licensing* (5%)
- » Distracted Driving (5%)
- » Work Zones (1%)
- » Emergency Response**
- » Emerging Technologies**

The percentages represent the number of fatalities and serious injuries each Challenge Area makes up per 2009–2018 SWITRS data

** represents only fatalities data from FARS*

*** limited data regarding fatalities and serious injuries data*

Figure 1.5

SHSP Challenge Areas

Methodology

This LRSP followed the FHWA's data-driven map to a safer roadway as shown in (Figure 1.6). This 'roadmap' was provided as a guide by the Federal Highway Administration with a clear starting point progressing toward a finish line of helping people get home safely.



Figure 1.6 USDOT FHA LRSP Roadmap

Stakeholders

LRSP Stakeholders

The City of Rio Dell recognizes that an effective LRSP starts with a strong working group of stakeholders who can identify the community's safety needs while prioritizing goals and safety countermeasures accordingly. The LRSP working group included feedback and commentary from the following LRSP Safety Partners:

- City of Rio Dell
- Rio Dell Public Works
- Rio Dell Police Department
- Rio Dell Fire Department
- Rio Dell School District

LRSP Community Engagement

The City of Rio Dell provided stakeholders with an array of options to get the most complete and accurate feedback from its Safety Partners. Given the challenges faced under the Covid-19 pandemic, both in-person and virtual options were available to provide feedback.

- May 3, 2022 6:30p.m. – 8:30p.m.
 - LRSP Progress Report was presented by City Staff. An overview of the project detailing the Vision Statement, Safety Data Analysis, Collision Profiles, Community Engagement, and Priority Emphasis Areas were discussed.
 - LRSP Community Engagement Survey (**Figure 1.7**) was released to address safety concerns and locations.



Online Survey for the Local Road Safety Plan (LRSP)

Submitted by macielr on Tue, 04/19/2022 - 3:50pm

City of Rio Dell Local Road Safety Survey

The City of Rio Dell is preparing a Local Road Safety Plan to analyze and address traffic safety issues throughout the City. This survey will provide crucial community feedback to inform decisions made in the Plan.

Please answer the following questions as they pertain to your experience within the City of Rio Dell.

 sanborntriodell@gmail.com (not shared)
[Switch account](#)



* Required

How important is traffic safety (including motorist, pedestrian, and bicyclist safety) to the wellbeing of the Rio Dell community? *

- ☐ Very Important
☐ Somewhat Important
☐ Unimportant

What are your biggest traffic safety concerns? (Please rank from Most (1) to Least Concerning (5)). *

	Driving under the influence	Speeding	Vehicle safety and infrastructure	Bicycle Safety and infrastructure	Pedestrian Safety and Infrastructure
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2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 1.7 LRSP Community Engagement Survey

SHSP Challenge Areas

Based on feedback from our Safety Partners, this LRSP will address the following SHSP Challenge Areas:

1. *Speed Management / Aggressive Driving*
2. *Pedestrians*
3. *Bicyclists*
4. *Impaired Driving*
5. *Intersections*

Guiding Principles

The LRSP vision statement and goals directed the development of this document. This plan will move the City closer to the Vision Zero policy aimed to eliminate all traffic fatalities and severe injuries while increasing safe, healthy, and equitable mobility for all.

Vision Zero

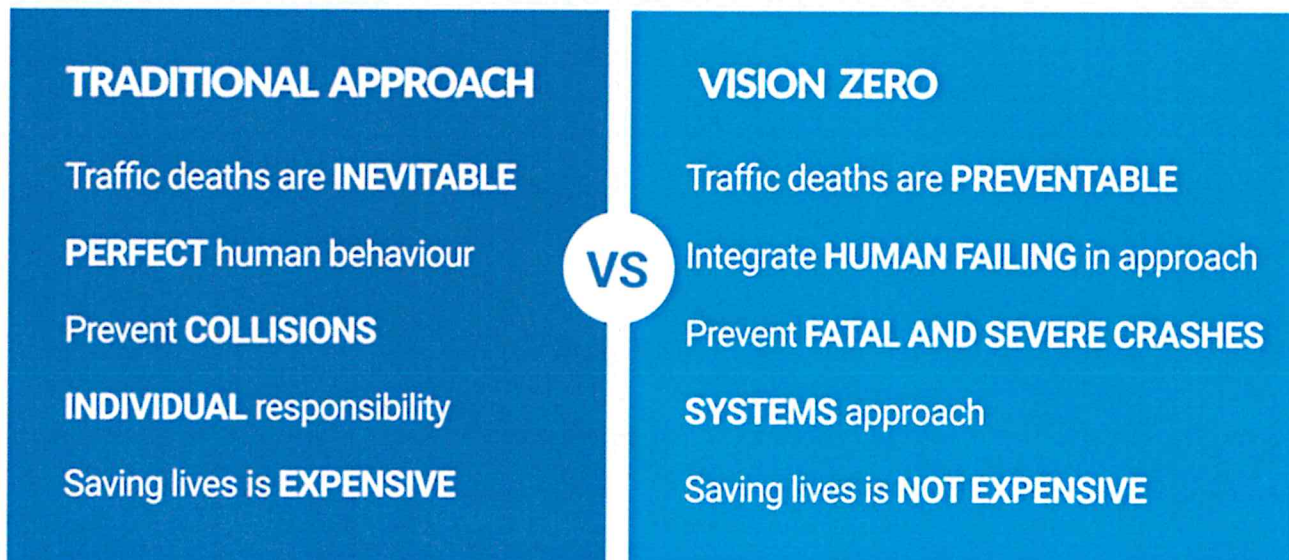


Figure 1.8 Traditional Approach vs Vision Zero

The differences between the traditional approach vs vision zero approaches are displayed in (Figure 1.8).

Vision Zero is a significant departure from the status quo in two major ways:

1. Vision Zero recognizes that people will sometimes make mistakes, so the road system and related policies should be designed to ensure those inevitable mistakes do not result in severe injuries or fatalities. This means that system designers and policymakers are expected to improve the roadway environment, policies (such as speed management), and other related systems to lessen the severity of crashes.
2. Vision Zero is a multidisciplinary approach, bringing together diverse and necessary stakeholders to address this complex problem. In the past, meaningful, cross-disciplinary collaboration among local traffic planners and engineers, policymakers, and public health professionals has not been the norm. Vision Zero acknowledges that many factors contribute to safe mobility — including roadway design, speeds, behaviors, technology, and policies — and sets clear goals to achieve the shared goal of zero fatalities and severe injuries.

Vision Statement

“The City of Rio Dell is fully committed to ending traffic-related deaths and injuries on City streets. By taking a systemic safety approach, the City will utilize targeted enforcement, improved street design, and public collaboration to achieve meaningful results in preventing traffic collisions.”

Goals

Goal #1: Create an LRSP targeted to Rio Dell’s transportation and safety needs

Goal #2: Increase access and comfort for pedestrians and bicyclists

Goal #3: Reduce the potential for fatal and severe injury collisions

Goal #4: Implement speed reduction and management strategies

Goal #5: Maintain and expand a multimodal transportation network

Analyze Safety Data

Active Transportation Program (ATP)



**California Active
Transportation Program**

The project is located within the City of Rio Dell and includes improvements on Bellevue Avenue between Wildwood Avenue and River Street, Wildwood Avenue between Bellevue Avenue and Davis Street, Davis Street between Wildwood and Rigby Avenue, and the intersection of Scenic Way and Eeloa Avenue. Improvements to Bellevue Avenue would include buffered bike lanes and signage. Improvements to Wildwood Avenue between Bellevue Avenue and Davis Street include bike lane striping and signage. Improvements on Davis Street include class II and class III bike facilities and modifications at the intersection of both the on and off-ramp of Highway 101 and to Ireland Street. Other improvements at the intersections include curb ramps, sidewalks, crosswalks, signage, and striping.



Collision Data

Data from the City of Rio Dell's Annual Traffic Accident Report data from 2016-2021 and available collision data from California Highway Patrol's Statewide Integrated Traffic Records System (SWITRS) and the Transportation Injury Mapping System (TIMS), each reported collision was mapped and analyzed. The data pool consists of 84 accident profiles which included 2 major injuries and 9 minor injuries.



- 2 Major Injuries

- 1241 Eeloa Avenue
- Davis/Wildwood

- 9 Minor Injuries

- 200 Block Wildwood Avenue
- Eeloa Avenue / Fern Street
- Orchard / Pacific Avenue
- 75 Wildwood Avenue
- 541 Wildwood Avenue
- 100 Monument Road
- 300 Painter Street
- Davis / Wildwood
- 1241 Eeloa Avenue



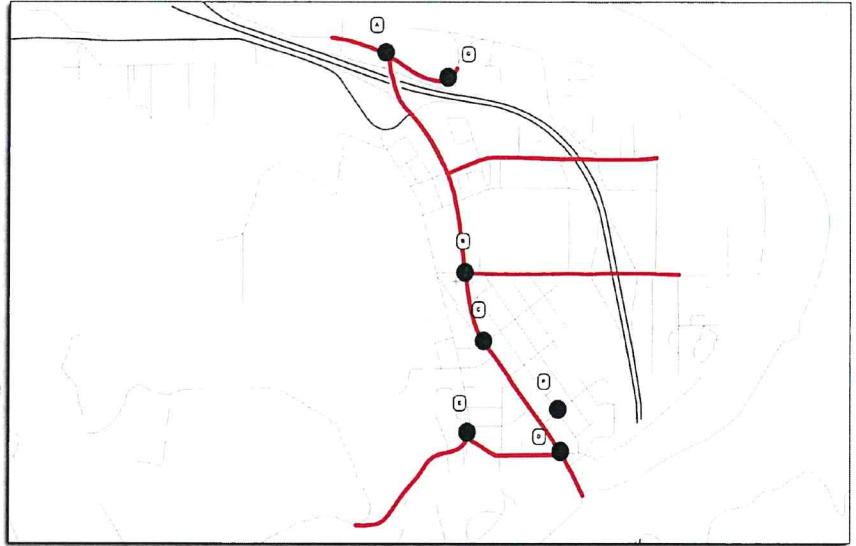
Top Collision Locations

Key Collision Locations

- a. Wildwood Avenue and Eeloa Avenue
- b. Wildwood Avenue and Davis Street
- c. Wildwood Avenue and Dixie Street
- d. Wildwood Avenue and Monument Road
- e. Monument Road and Pacific Avenue
- f. Berkeley Street and First Avenue
- g. Eeloa Avenue and Fern Street

Key Collision Corridors

- Wildwood Avenue: Eeloa Ave to Eagle Prairie Bridge
- Monument Road: Wildwood Ave to City Limits
- Davis Street: Wildwood Ave to Gunnerson Lane
- Painter Street: Wildwood Ave to Rigby Ave
- Eeloa Avenue: N. Pacific Ave to Riverside Drive



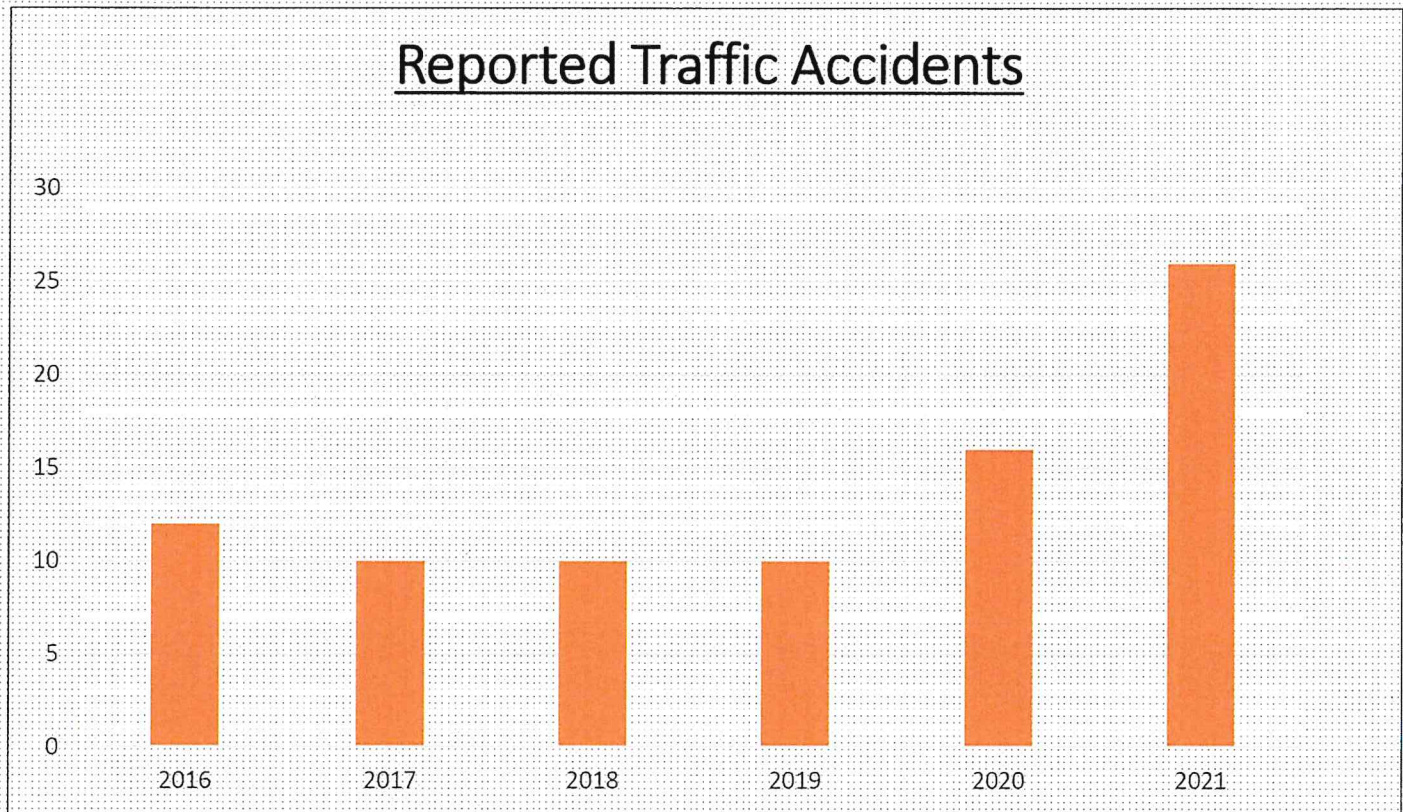
As part of the Safety Data Analysis using traffic accident data dating back to 2016- several key collision locations and corridors were identified. These locations were determined based on accident frequency, minor and major injuries, and primary collision factors.

Several locations along Wildwood Avenue were determined to have a much higher incidence of accidents such as the intersections of Wildwood Avenue and Eeloa Avenue, Davis Street, Dixie Street, and Monument Road. Other locations include the intersection at Monument Road and Pacific Avenue, Berkeley Street, and First Avenue, and the turn at Eeloa Avenue and Fern Street.

Additionally – collision corridors were identified which included:

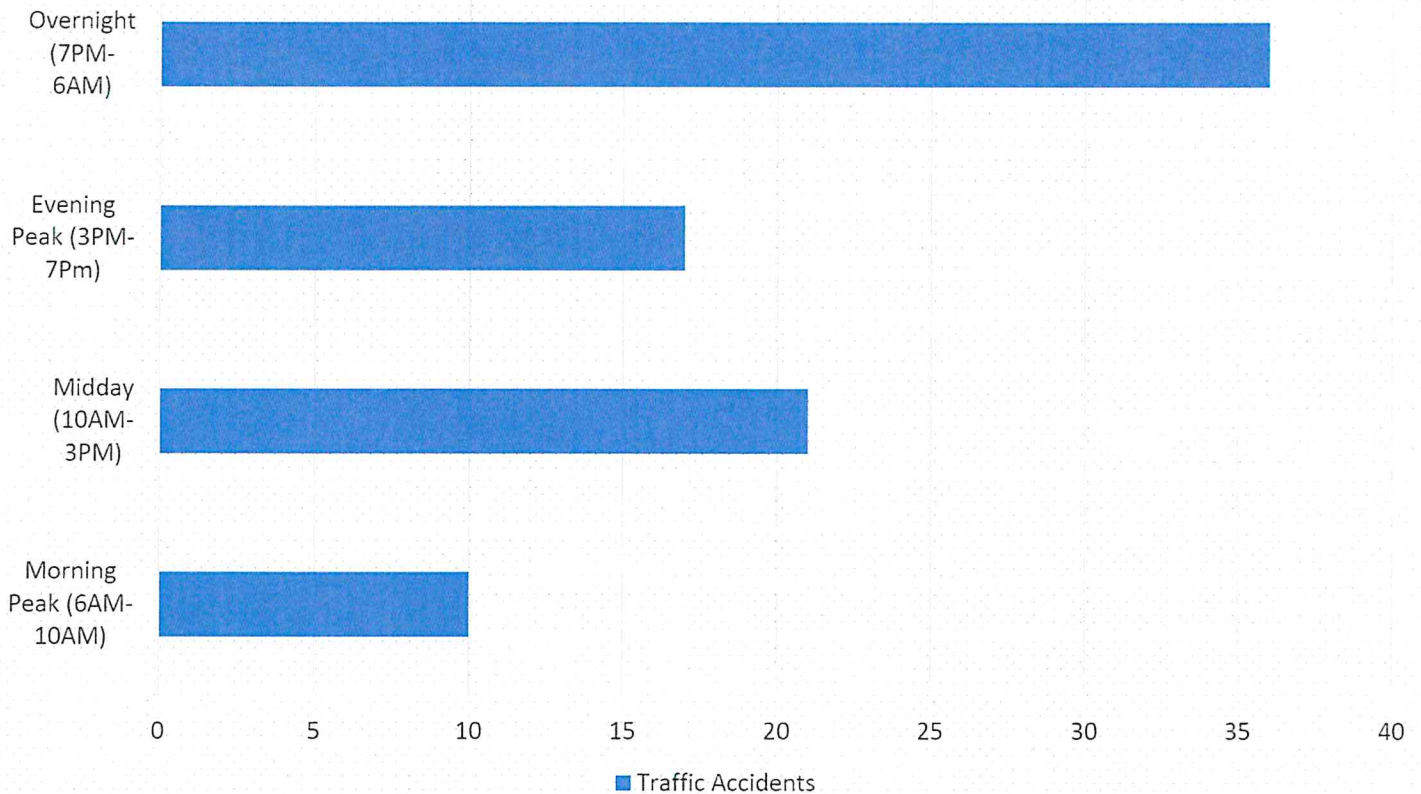
- *Wildwood Avenue from Eeloa Avenue to the Eagle Prairie Bridge*
- *Monument Road, from Wildwood Avenue up to the City limits*
- *Davis Street, from Wildwood Avenue to Gunnerson Lane*
- *Painter Street, Wildwood Avenue to Rigby Avenue*
- *Eeloa Avenue, from North Pacific to Riverside Drive*

Traffic Accidents by Year



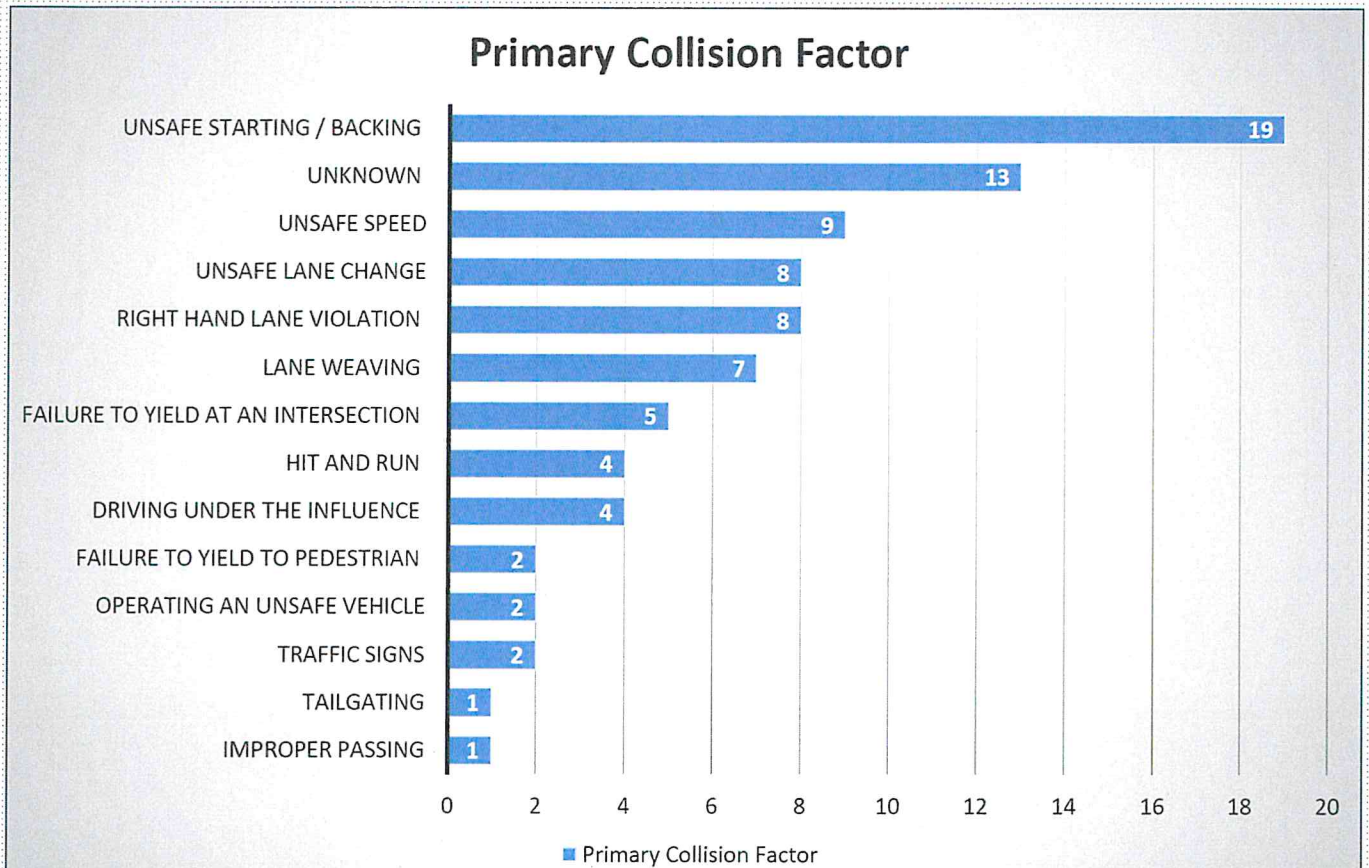
The bar graph above details traffic accidents by year based on raw data collected. Although the trendline suggests an increase in total accidents increasing over time, it is important to note that improvements in the reporting by the Rio Dell Police Department have allowed for better data collection methods.

Traffic Accidents Time of Day



Data collected on the time of day accidents occurred were categorized with a majority of accidents occurring between 7 pm and 6 am. Accidents were reportedly least likely to occur during the morning peak hours from 6 am to 10 am.

Traffic Accident Primary Collision Factor



Included in the accident reports were the primary factors leading to a collision. Unsafe starting and backing was the most pervasive violation in addition to unsafe speeds, lane change violations, lane weaving, and failure to yield at an intersection.

Safety Data Analysis Summary

- The completed LRSP ensures the City continues to **MEET ELIGIBILITY REQUIREMENTS** to apply for and receive HSIP funds.
- During the analysis period 2016-2021, there have been a total of **84 reported traffic accidents** in Rio Dell.
 - 2 Major Injuries Reported (2%)
 - 9 Minor Injuries Reported (11%)
 - 4 Accidents were a result of a DUI (5%)



- The top **PRIMARY COLLISION FACTORS** include:
 - Unsafe Starting / Backing
 - Unsafe Speed
 - Unsafe Lane Change
 - Right-Hand Lane Violation
- The **TIME OF DAY** accidents were most likely to occur
 - Overnight hours (7 PM – 6 AM) 36 reported accidents (43%)

Public Outreach

Community Survey

A project survey was created and presented on the City of Rio Dell website to inform the public about the LRSP and allow stakeholders to provide their input to the project. (Figure 1.9) The image below displays the introduction to the community survey.

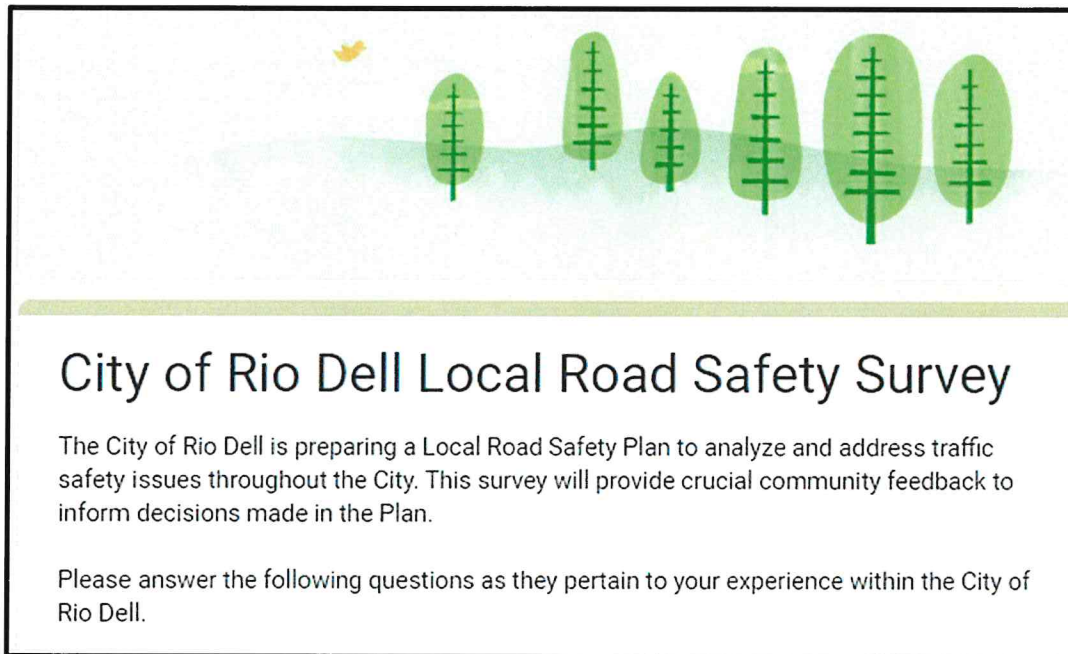


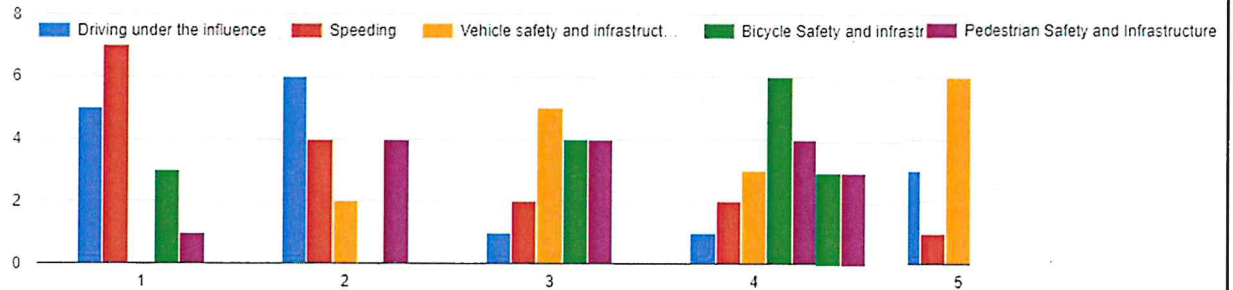
Figure 1.9 Community Survey

Survey Results

The City of Rio Dell released the public survey asking a series of questions relating to the work the LRSP is looking to accomplish along with a map to detail site-specific locations of concern to the community. As of 2023, 16 responses were received.

- **93.4%** of those surveyed felt that traffic safety (including motorist, pedestrian, and bicyclist safety) was **VERY IMPORTANT** to the well-being of Rio Dell.

What are your biggest traffic safety concerns? (Please rank from Most (1) to Least Concerning (5)).



- Speeding and Driving under the Influence were the top two traffic safety concerns among those surveyed.

What motorist safety concerns do you have in Rio Dell and where?

- Speeding and poor visibility at intersections around the City were noted as the leading concerns for motorists. Narrow streets and excess vehicle street parking around intersections were specifically mentioned.

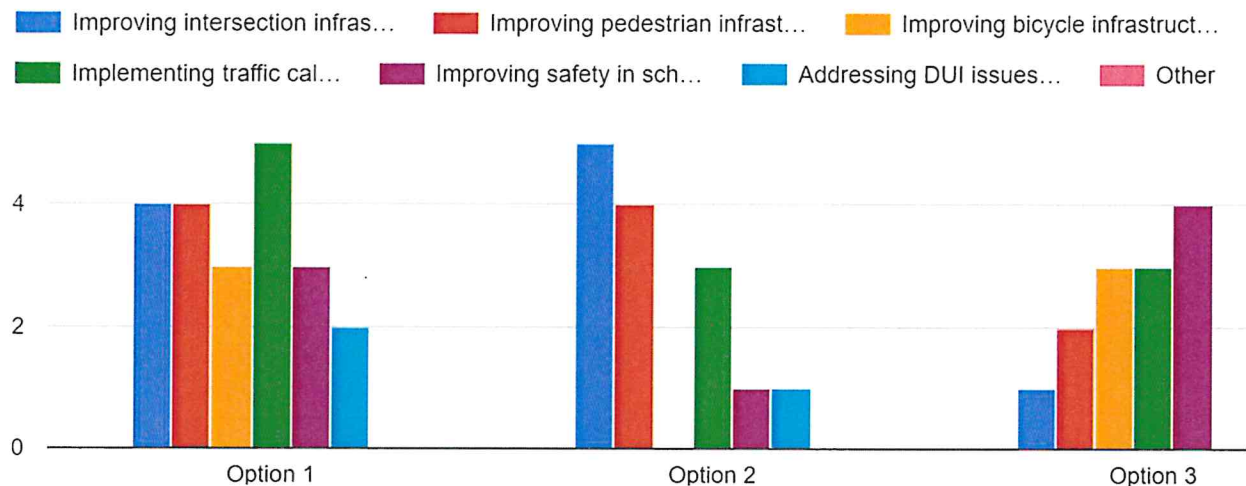
What pedestrian safety concerns do you have in Rio Dell and where?

- Poor visibility around pedestrian crossings and loose dogs around town were among the comments of those most concerned with pedestrian safety issues in Rio Dell mentioned.

What bicycle safety concerns do you have in Rio Dell and where?

- Speeding vehicles and narrow or obstructed road shoulders were concerns for bicyclist safety around the City of Rio Dell.

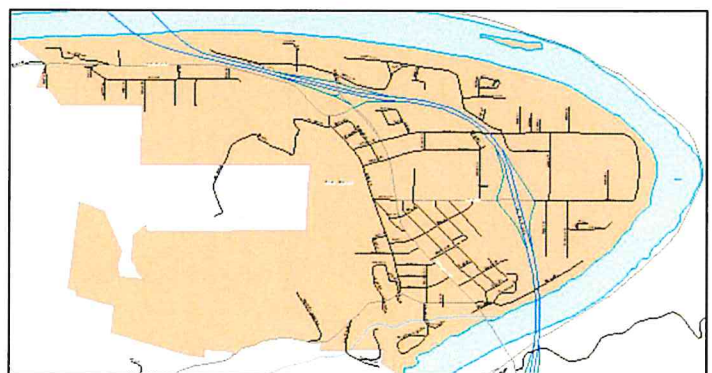
Which of the following safety measures are most important to you? (Select up to three)



- Improving intersection infrastructure, pedestrian infrastructure, and implementing traffic calming measures were the most important safety measures to address from the survey results.

Please provide the street(s) or intersection(s) of concern in the City of Rio Dell with regard to motorist, pedestrian, and bicycle safety.

- Top areas of concern included:
 - Wildwood Avenue
 - Belleview Avenue
 - Painter Street
 - Davis Street
 - Pacific Avenue



Priority and Integration of Strategies

Safety projects and strategies were identified for the Local Road Safety Plan through coordination and feedback from the City of Rio Dell, the LRSP working group, and public outreach. This LRSP will reference specific location engineering projects and systemic safety applications.

Engineering Strategies

The HSIP program offers grant funding for engineering countermeasures. Priority intersections and segment locations were determined based on the collision analysis and relative severity, public comments, and City feedback and recommendations. Further safety analysis refining collision data and subsequent safety projects should be conducted prior to applying to HSIP Cycle 11.

Countermeasures were evaluated and prioritized based on various factors including cost ratios as prescribed in Caltrans Local Road Safety Manual (LRSM). The benefit value of a crash is the expected reduction in crashes with the countermeasures and the associated costs with the crash. Caltrans uses 5 years of observed crash history in estimating future expected crashes. Benefits in reduction of cost can include savings to emergency response, medical costs, and property damage. The cost associated with a project is based on planning level estimates, construction cost estimates, planning and environmental costs, and costs associated with the right of way and utilities.

Rio Dell's priority intersections and segment locations were determined based on the collision analysis, relative severity, public comments, and City feedback and recommendations.

Challenge Areas

Based on the SHSP and LRSP working group, the LRSP identified the following challenge or focus areas

- Intersections - Projects were recognized to address collision safety and severity at accident-prone intersections.
- Pedestrians - Offer accommodations to include crossing enhancements and visibility of pedestrians on the sidewalk and roadways.
- Bicyclists - Offer accommodations to include crossing enhancements and visibility of bicyclists on the roadways.
- Speed Management / Aggressive Driving – Engineering and enforcement strategies were identified for intersections and segments of roadway where the issues are most apparent.

- Impaired Driving – Increase DUI enforcement through checkpoints and public education.

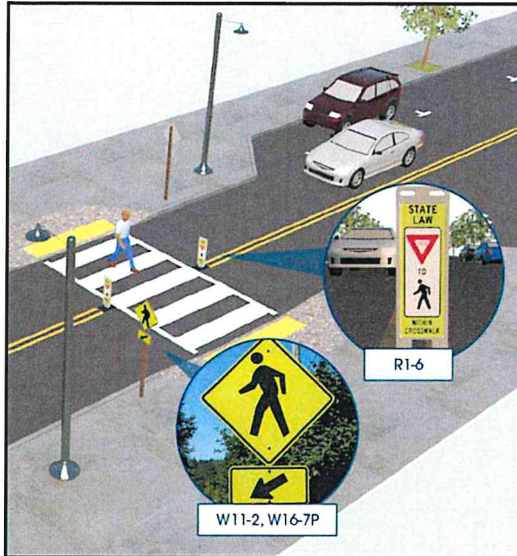
City Intersection Projects:

The location and characteristics of the priority intersections are shown below.

Primary Road	Secondary Road	Top Violation Category	Injuries	DUI
Wildwood Avenue	Eeloa Avenue	<i>-DUI, -Unknown</i>	2	1
Wildwood Avenue	Dixie Street	<i>-Lane Change Violation -Unsafe starting/backing</i>	1	0
Wildwood Avenue	Davis Street	<i>-Failure to Yield -Unsafe Speed</i>	2	0
Wildwood Avenue	Monument Road	<i>-Failure to Yield -Unsafe Speed</i>	1	0
Monument Road	Pacific Avenue	<i>-Unsafe lane change -Unsafe starting/backing</i>	1	0
Berkeley Street	First Avenue	<i>-Unsafe speed -Unsafe starting/backing</i>	0	0
Eeloa Avenue	Fern Street	<i>-Lane weaving</i>	1	0

The recommended countermeasures for these locations are shown in the following table.

Intersection	Challenge Area	Recommended Countermeasure
Wildwood Ave/Eeloa Ave	-Intersections -Pedestrians, Bicyclists	- Upgraded pedestrian crossing (flashing lights, etc.) -Improve sight distance to the intersection
Wildwood Ave./Dixie St.	-Intersections -Pedestrians, Bicyclists	-Upgraded pedestrian crossing (flashing lights, etc.) -Improve sight distance to the intersection
Wildwood Ave./Davis St.	-Intersections -Pedestrians, Bicyclists	- Evaluate intersection conversions to all-way stop control. -Upgraded pedestrian crossing (flashing lights, etc.) - Evaluate converting the intersection to a roundabout
Wildwood Ave./Monument Road	-Intersections -Pedestrians, Bicyclists	-Evaluate intersection conversions to all-way stop control. -Evaluate converting the intersection to a roundabout -Improve sight distance to the intersection -Upgraded pedestrian crossing (flashing lights, etc.)
Monument Road/ Pacific Ave	-Intersections -Pedestrians, Bicyclists	-Upgraded pedestrian crossing (flashing lights, etc.) -Improve sight distance to the intersection
Berkeley St./ First Ave.	-Intersections -Pedestrians, Bicyclists	-Upgraded pedestrian crossing (flashing lights, etc.) -Improve sight distance to the intersection
Eeloa Ave./Fern St.	-Intersections -Pedestrians, Bicyclists	-Improve sight distance to the intersection

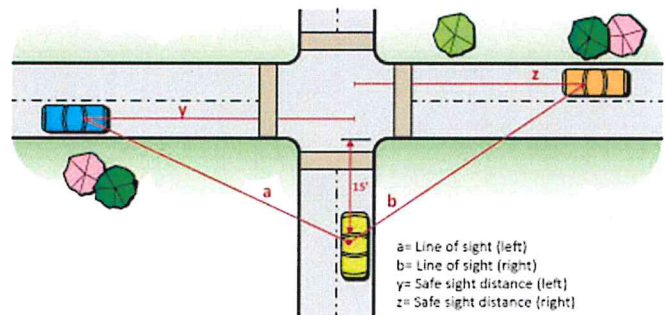


Upgraded Pedestrian Crossing:

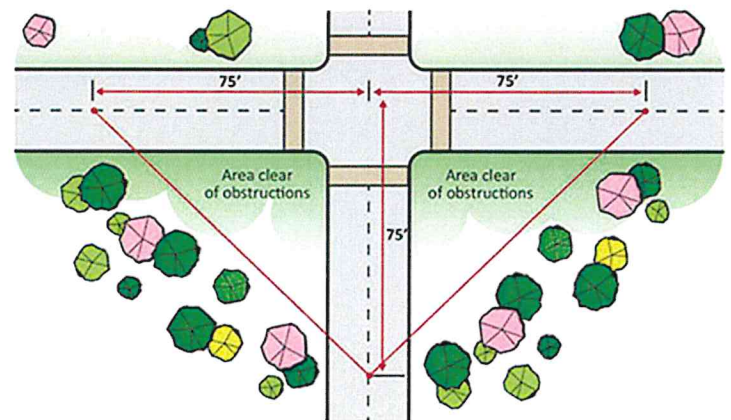
- Wildwood Ave./Eelo Ave.
- Wildwood Ave./ Dixie St.
- Wildwood Ave./Davis St.
- Wildwood Ave./Monument Road
- Monument Road/Pacific Ave.
- Berkeley St. First Ave.
- Eelo Ave./ Fern St.

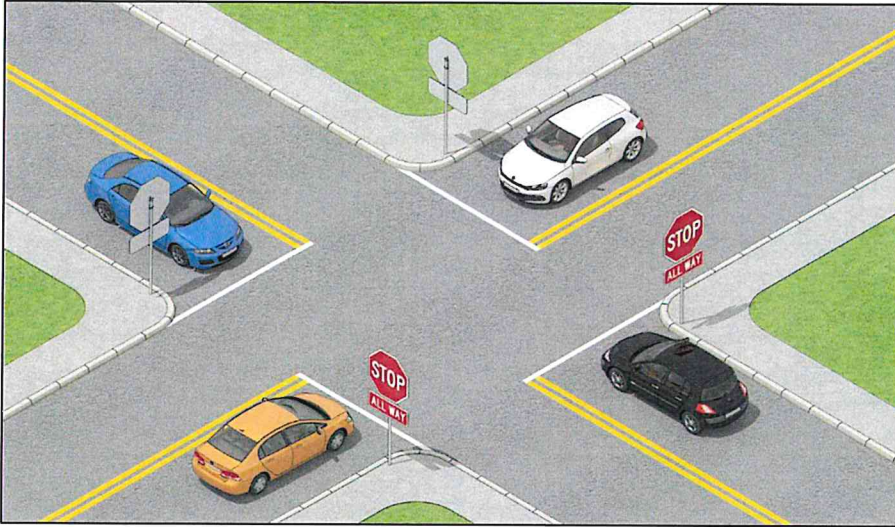
Improved sight distance:

- Wildwood Avenue / Eelo Avenue
- Wildwood Avenue / Dixie Street
- Wildwood Ave./Monument Road
- Monument Road/Pacific Ave.
- Berkeley St. First Ave.
- Eelo Ave./ Fern St.



Intersection Sight Triangle





Evaluate intersection conversions to all-way stop control:

- Wildwood Avenue / Davis Street
- Wildwood Avenue / Monument Road

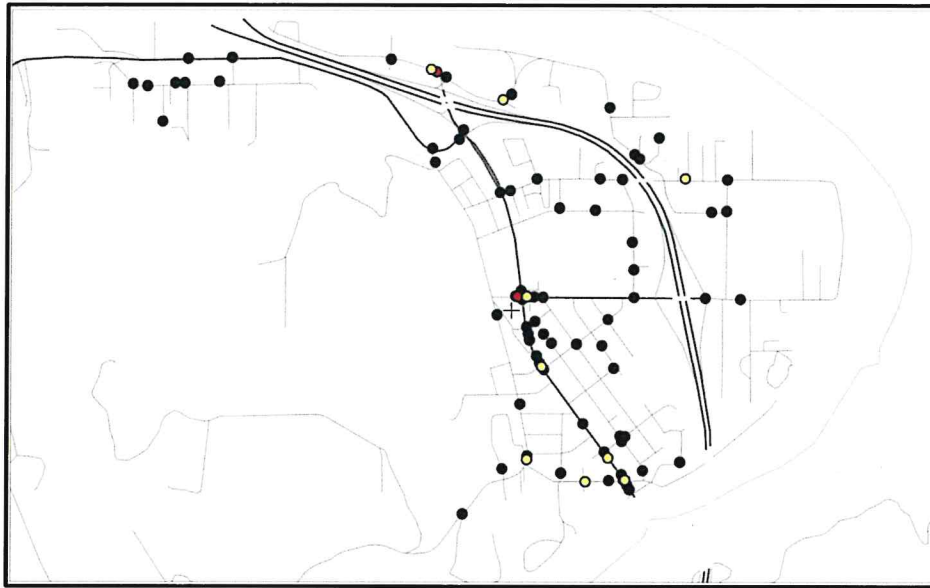


Evaluate converting the intersection to a roundabout:

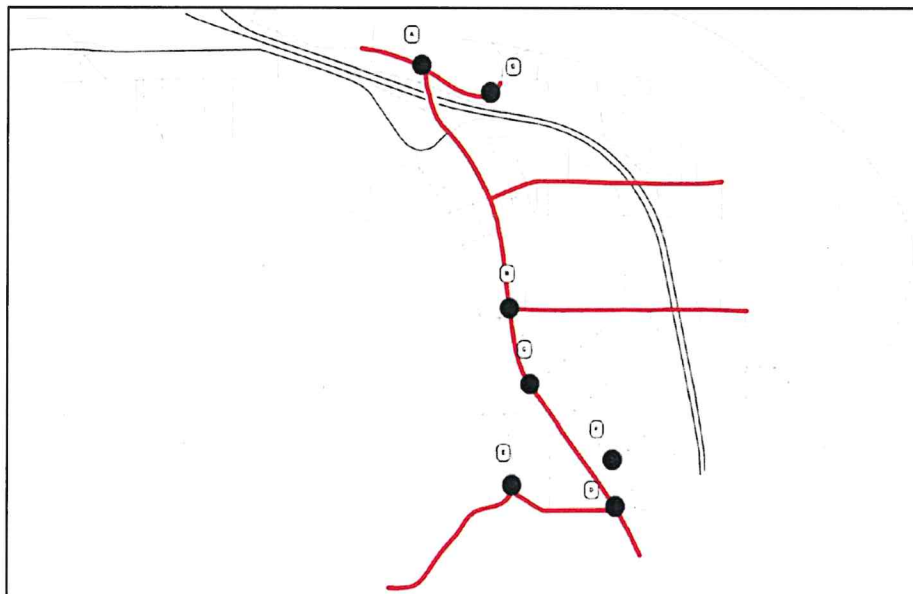
- Wildwood Avenue / Monument Road

City Corridor Projects

The data pool consists of 84 accident profiles which included 2 major injuries and 9 minor injuries with information gathered over a 5-year period (2016-2021). An analysis of roadway collisions is included in the map below:



As part of the Safety Data Analysis using traffic accident data, several key collision locations and corridors were identified. These locations were determined based on accident frequency, minor and major injuries, and primary collision factors.



Priority Segments:

- Wildwood Avenue from Eeloa Avenue to the Eagle Prairie Bridge
- Monument Road, from Wildwood Avenue up to the City limits
- Davis Street, from Wildwood Avenue to Gunnerson Lane
- Painter Street, Wildwood Avenue to Rigby Avenue
- Eeloa Avenue, from North Pacific to Riverside Drive

Priority segments for the City of Rio Dell along with their crash characteristics are shown in the table below:

Primary Road	Limits	Top Violation Category	Injuries	DUI
Wildwood Avenue	Eeloa Ave. – Eagle Prairie Bridge	<i>-Unsafe Speed -Failure to Yield at the Intersection</i>	7	2
Monument Road	Wildwood Avenue – City Limits	<i>-Unsafe Starting or Backing -Unsafe Lane Change</i>	2	1
Davis Street	Wildwood Avenue – Gunnerson Lane	<i>-Unsafe Lane Change -Failure to Yield at the Intersection</i>	2	1
Painter Street	Wildwood Avenue – Rigby Avenue	<i>-Unsafe Speed</i>	1	0
Eeloa Avenue	North Pacific – Riverside Drive	<i>-Lane Weaving -Unsafe Starting / Backing</i>	3	1

The recommended countermeasures for these corridors are shown in the following table.

Corridor (Primary Road)	Challenge Area	Recommended Countermeasure
Wildwood Avenue	-Pedestrians, Bicyclists -Speed Management/ Aggressive Driving -Impaired Driving	-Add segment lighting -Refresh bike lane striping -Increase DUI enforcement -Install edge-line reflectors. -Radar Signs
Monument Road	-Pedestrians, Bicyclists -Speed Management/ Aggressive Driving -Impaired Driving	-Add segment lighting -Install bike lanes -Complete sidewalk infill -Install/refresh edge and centerlines -Install edge-line reflectors.
Davis Street	-Pedestrians, Bicyclists -Speed Management/ Aggressive Driving -Impaired Driving	-Install no passing line -Install/refresh edge and centerlines -Add segment lighting -Install edge-line reflectors. -Install additional bike lanes -Radar Signs
Painter Street	-Pedestrians, Bicyclists -Speed Management/ Aggressive Driving -Impaired Driving	-Install/refresh edge and centerlines -Add segment lighting -Install edge line reflectors. -Complete sidewalk infill -Install bike lanes -Radar Signs
Eeloa Avenue	-Pedestrians, Bicyclists -Speed Management/ Aggressive Driving -Impaired Driving	- Install/refresh edge and centerlines -Add segment lighting -Install edge line reflectors. -Complete sidewalk infill -Install additional bike lanes



Add Segment Lighting:

- All corridors

Install Bike Lanes:

- Monument Road
- Davis Street
- Painter Street
- Eeloa Avenue



Install/refresh edge and centerlines:

- All corridors



Complete Sidewalk Infill:

- Monument Avenue
- Davis Street
- Painter Street
- Eeloa Avenue



Increase DUI enforcement:

- All corridors
- Checkpoint on Wildwood Avenue

Systemic Safety Countermeasures

Employing a systemic analysis allows the City to leverage a proactive safety approach that focuses on **evaluating an entire roadway** network using a defined set of criteria reliant upon context rather than the raw number of crashes alone. Identifying profiles is part of a systemic process to proactively identify locations that have similar contexts but may have experienced few collisions to date. Caltrans' Local Road Safety Manual recommends agencies utilize a comprehensive plan that includes systemic and priority segments in the development of the LRSP.

Results of the public survey and observations around the City of Rio Dell revealed that many sections of town do not have sidewalks or edge lines painted on the roadway. It is recommended that the City continue to invest in sidewalk infill, especially in areas with higher pedestrian volumes along with painting the edge lines or creating bike lanes.

Non-Engineering Strategies

The LRSP utilizes a comprehensive approach to safety incorporating the “5 E’s of traffic safety”: Engineering, Enforcement, Education, Emerging Technologies, and Emergency Response. This approach recognizes that not all locations can be addressed solely by infrastructure improvements. Incorporating the 5 E’s of traffic safety is often required to ensure the successful implementation of significant safety improvements and reduce the severity and frequency of collisions throughout a jurisdiction. Some of the common violation types that may require a comprehensive approach are speeding, failure to yield to pedestrians, aggressive driving, failure to wear safety belts, distracted driving, and driving while impaired. When locations are identified as having these types of violations, coordination with law enforcement agencies is needed to arrange visible targeted enforcement to reduce the potential for future driving violations and related crashes and injuries. To improve safety, education efforts can be used to supplement enforcement and improve the efficiency of each strategy. Education can also be employed in the short term to address high crash locations until the recommended infrastructure project can be implemented. Similarly, Emergency Response entails strategies around supporting organizations that provide rapid response and care when responding to collisions causing injury, by stabilizing victims and transporting them to medical facilities.

Implementation and Evaluation

This section describes the steps the City may take to evaluate the success of this plan and the steps needed to update the plan in the future. The LRSP is a guidance document and requires periodic updates to assess its efficacy and re-evaluate potential solutions. This document was developed based on community needs, stakeholder input, and collision analysis conducted to identify priority emphasis areas throughout Rio Dell. The implementation of strategies under each emphasis area would aim to reduce injury-related collisions in the coming years.

Implementation

The LRSP document provides engineering, education, enforcement, and emergency medical service-related countermeasures that can be implemented throughout the City working towards the goal of zero fatalities and severe injuries. It is recommended that the City of Rio Dell implement the selected projects in high-collision locations in coordination with other projects proposed for the City's infrastructure development in their future Capital Improvement Plans. After implementing countermeasures, the performance measures for each emphasis area should be evaluated annually. The most important measure of success of the LRSP should be reducing fatal or severe collisions throughout the City of Rio Dell. If the number of collisions does not decrease over time, then the emphasis areas and countermeasures should be reevaluated. Funding is a critical component of implementing any safety project. While the HSIP program is a common source of funding for safety projects, other funding sources should be pursued for such projects, if available.

Monitoring and Evaluation

For the success of the LRSP, it is crucial to monitor and evaluate the five E-strategies continuously. Monitoring and evaluation help provide accountability ensures the effectiveness of the countermeasures for each emphasis area, and help make decisions on the need for new strategies. The process would help the City make informed decisions regarding the implementation plan's progress and accordingly, update the goals and objectives of the plan. After implementing countermeasures, the strategies should be evaluated annually as per their performance measures. The evaluation should be recorded in a before-after study to validate the effectiveness of each countermeasure. Evaluation should be conducted during similar time periods and durations each year. The most important measure of success of the LRSP should be a reduction in fatal or severe injury collisions throughout the City. If the number of collisions doesn't decrease initially, then the countermeasures should be re-evaluated. The effectiveness of the countermeasures should be compared to the goals for each emphasis area.

LRSP Update

The LRSP is a guidance document and is recommended to be updated every two to five years after adoption. After monitoring performance measures focused on the status and progress of the E's strategies in each emphasis area, the next LRSP update can be tailored to resolve any continuing safety problems. An annual stakeholder meeting with the safety partners is also recommended to discuss the progress for each emphasis area and oversee the implementation plan. The document should then be updated as per the latest collision data, emerging trends, and the E's strategies' progress and implementation.

Appendix A:

Stakeholder Input

Motorist Safety Concerns

- The speeding on the main street and the kids riding dirt bikes on paved streets.
- The speed of people going up Monument Road.
- Poor road condition that could damage suspension, tires, and wheels.
- Speeding...on side streets
- Visibility (too many parked cars on narrow roads) and speeding
- Rio Dell has numerous intersections with very poor visibility. These include Dixie at Wildwood, Monument at Pacific and Monument/Edwards at Wildwood. These issues are the result of slope and angle. They could be mitigated to some extent by painting the curbs red to prevent vehicles from further hindering visibility. However, this tactic would not appeal to many as limited parking is also a major issue. Balancing the two is one of the issues inherent in any planning study. Another major issue is the narrowness of the Avenues. In many cases, it is not possible to for two cars to pass each other unless one pulls to the curb and stops. This results in numerous minor accidents as cars try to navigate the narrow streets. Especially problematic are the 100-300 blocks of First Avenue. These hazards could also be mitigated to some extent by reducing parking. However, many of the residences in this area have limited to no off-street parking and the City would need to find an alternative that would be agreeable to the residents.
- Parking and speeding. Parking issue mainly on the avenues and intersections.
- Speeding on Wildwood
- road width in Avenues, for safety personnel. parking on side of roads and blocking line of sight.
- Poorly lit and steep intersection at painter and wildwood.
- Speeding on Painter Street and rolling through the stop sign at the intersection of Painter Street onto Wildwood Avenue. I see this a lot.
- Intersection blocked by parked vehicles: Gunnerson at Hilltop
- Speeding on Davis St. east of the overpass and speeding on Gunnerson Lane. A stop sign at Hilltop and Gunnerson Ln. is needed. Parked vehicles at the corner of Hilltop and Gunnerson block visibility and fire hydrant access. The PD could be MUCH more aggressive targeting unlawful driving. How about some of those radar signs to alert people to their speed?
- Drivers drive to fast . Worried for. my children & other peoples children on bikes .

Pedestrian Safety Concerns

Parking around crosswalks makes it hard to see pedestrians before they step into the street.

All the loose dogs around Wildwood and the surrounding streets -- feels unsafe to take our (leashed) dogs on a walk.

people driving too fast on all the streets, but especially when kids are going to and from school.

Pedestrian crossings are poorly lit.

All over town

DOGS, They R either too close to 'sidewalks', inciting fear/danger, or loose. All over town!!

Most of the pedestrian involved accidents are the result of driver's not paying attention to the conditions around them. I am unaware of a real fix for this issue.

Pedestrians not looking before walking into the roadway and not using crosswalks.

Dark at night, difficult to see pedestrians in cross walk.

dark cross walks.

Lack of sidewalks on painter

Davis at Ireland 0730-0800 weekdays, speeding motorists, students crossing Davis

Speeding and intoxicated/distracted drivers. Vehicles parked too close to intersections block visibility of traffic about to enter from that side street.

On orchard they drive too fast around the corner & on pacific ave & monument

Bicycle Safety Concerns

Most don't seem to understand the rules of the road.

Not a safe area for them near the freeway entrances.

Road shoulders and bike lanes are littered with debris impairing movement.

All over town

There is nowhere safe to bike or walk here in RioDell

Most of the bicycle related accidents in Rio Dell have been the fault of the cyclist. At least two of these involved riders under the age of 18. There is probably a place for a safety fair held at the school. These have occurred in the past, but Covid killed off any thoughts of holding another in the last couple of years. When the cyclist is not at fault, the primary cause of bicycle/vehicle accidents is the driver not paying attention and/or not understanding bicycle dynamics. I am not sure there is a proactive cure for this, at least until more and more people start riding bicycles and they become the norm rather than an occasional occurrence.

Paying attention to vehicles before crossing an intersection.

Speeding along Wildwood

bad roads and speeding drivers.

N/a

Avenues area, narrow streets, loose dogs

Speeding and intoxicated/distracted drivers. Any way to make the bicycle lane on the bridge to Scotia a little wider and more noticeable?

All over town

Rio Dell Streets / Intersections of Concern

Wildwood, Davis, Painter, Pacific, Belleview, Center and Monument

Wildwood

2nd Avenue

Ogle Avenue, Belleview-Wildwood Ave intersection

Wildwood and Cedar

Pacific Ave

Answered above.

Wildwood, 1st Avenue, 2nd Avenue, 3rd Avenue, 4th Avenue, Eeloa, Monument, Davis, Dixie, Edwards/Wildwood, Painter, Riverside

Elko and Wildwood, lights for crosswalk

Intersection of Painter and wildwood

Painter Street; Wildwood Avenue

I think there should be a stop sign on Hilltop at Gunnerson due to blind intersection (parked vehicles blocking visibility).

Davis St. and Gunnerson Lane

Appendix B:

Collision Data

2021 Traffic Accident Report

2021 Traffic Accident Report

Case #	Date	Time	Location	Minor Injuries	Major Injuries	Fatal Injuries	DUI	Violation
175	3/26/2021	12:55	700 Ireland Ave	0	0	0	No	CVC22106:Unsafe starting or backing
188	3/30/2021	8:34	Center St / Chase Ave	0	0	0	No	CVC22107: Unsafe lane change
210	4/6/2021	0:00	441 3rd Ave	0	0	0	No	CVC21650: Right hand lane violation
212	4/8/2021	19:00	200 Block Wildwood	1	0	0	No	CVC21950: Failure to yield to pedestrian
228	4/17/2021	19:50	Rigby Ave / Painter Street	0	0	0	No	CVC21650: Right hand lane violation
231	4/18/2021	1:29	87 Berkeley Street	0	0	0	No	CVC22350: Unsafe Speed
233	4/18/2021	18:30	Bellview / Wildwood	0	0	0	No	CVC22106:Unsafe starting or backing
244	4/24/2021	20:18	315 Wildwood Ave	0	0	0	No	CVC21804(a): Failure to yield when exiting an alley or driveway
250	4/26/2021	11:30	675 Wildwood Ave	0	0	0	No	CVC21650: Right hand lane violation
264	5/4/2021	10:00	541 Wildwood Ave	0	0	0	No	CVC22106:Unsafe starting or backing
279	5/11/2021	15:18	1000 Riverside Drive	0	0	0	No	CVC21800 C : Failure to yield at stop sign
299	5/22/2021	22:51	209 Ogle Ave	0	0	0	No	CVC22106:Unsafe starting or backing
300	5/23/2021	6:00	233 Cherry Lane	0	0	0	No	CVC22106:Unsafe starting or backing
357	6/14/2021	11:25	Painter	0	0	0	No	CVC22350: Unsafe Speed
371	6/23/2021	19:30	675 Wildwood Ave	0	0	0	No	CVC22106:Unsafe starting or backing
378	6/26/2021	1:50	1241 Eeloa Ave	0	1	0	No	Unknown
456	8/10/2021	1:17	117 Meadow Bridge	0	0	0	No	CVC21650: Right hand lane violation
458	8/12/2021	22:30	94 Painter Street	0	0	0	No	CVC22350: Unsafe Speed
483	8/24/2021	15:40	Eeloa Ave / Fern Street	1	0	0	No	CVC21658(a): Lane Weaving
500	9/4/2021	14:49	582 Wildwood Ave	0	0	0	No	CVC22107: Unsafe lane change
555	9/29/2021	0:00	922 Hilda Court	0	0	0	No	Unknown
645	11/6/2021	20:22	Orchard St / Pacific	1	0	0	No	CVC22107: Unsafe lane change
741	12/29/2021	15:37	75 Wildwood Avenue	0	0	0	No	Unknown

2020 Traffic Accident Report

2020 Traffic Accident Report

Case #	Date	Time	Location	Minor Injuries	Major Injuries	Fatal Injuries	DUI	Violation
026	1/8/2020	9:00	100 Block Wildwood	0	0	0	Unknown	CVC22350: Unsafe Speed
124	4/3/2020	13:55	72 First Ave	0	0	0	Unknown	CVC22350: Unsafe Speed
155	4/24/2020	11:55	582 Wildwood	0	0	0	Unknown	CVC22106:Unsafe starting or backing
228	5/29/2020	23:07	364 Center Street	0	0	0	Unknown	CVC22106:Unsafe starting or backing
242	6/9/2020	10:00	400 Northwestern Ave	Unknown	0	0	Unknown	CVC22350: Unsafe Speed
295	7/4/2020	0:02	70 Wildwood Ave	0	0	0	Unknown	CVC22106:Unsafe starting or backing
351	8/2/2020	19:24	87 Berkeley Street	0	0	0	No	CVC22106:Unsafe starting or backing
365	8/13/2020	14:34	75 Wildwood Ave	1	0	0	No	CVC21950(a): Failure to yield to pedestrian at crosswalk
460	9/30/2020	14:36	541 Wildwood Ave	1	0	0	No	CVC21650: Right hand lane violation
461	9/30/2020	17:50	33 Monument	0	0	0	Unknown	CVC22106:Unsafe starting or backing
492	10/17/2020	19:29	435 Davis	0	0	0	Yes	CVC22107: Unsafe lane change
503	10/24/2020	12:43	45 Davis	0	0	0	Unknown	Unknown
521	10/29/2020	12:05	290 Willow	0	0	0	Unknown	Unknown
548	11/11/2020	23:38	233 Ogle	0	0	0	Yes	CVC22107: Unsafe lane change
560	11/17/2020	6:53	500 Block Wildwood	0	0	0	No	CVC21650: Right hand lane violation
608	12/18/2020	16:00	185 Wildwood Ave	0	0	0	Unknown	CVC22106:Unsafe starting or backing

2019 Traffic Accident Report

2019 Traffic Accident Report

Case #	Date	Time	Location	Minor Injuries	Major Injuries	Fatal Injuries	DUI	Violation
001	1/1/2019	17:05	385 3rd Ave	0	0	0	Unknown	CVC22350: Unsafe Speed
027	1/21/2019	0:00	Ireland	0	0	0	Unknown	Unknown
035	1/29/2019	1:00	1st Ave	0	0	0	No	CVC22106:Unsafe starting or backing
077	2/22/2019	19:20	Redwood Ave	0	0	0	No	CVC22106:Unsafe starting or backing
148	4/7/2019	20:24	Eeloa / N. Pacific Ave	0	0	0	Unknown	CVC22106:Unsafe starting or backing
240	6/4/2019	21:25	Bellevue / Spring	0	0	0	No	CVC22107: Unsafe lane change
374	8/20/2019	10:44	Wildwood / Elko	0	0	0	No	Unknown
454	10/2/2019	22:30	Ogle	0	0	0	No	CVC22106:Unsafe starting or backing
493	10/28/2019	8:25	Center St / Middle School	0	0	0	No	CVC21804: Failure to yield when exiting an alley or driveway
532	11/21/2019	15:40	Wildwood / Monument	0	0	0	No	CVC21802(a): Failure to yield at intersection

2018 Traffic Accident Report

2018 Traffic Accident Report

Case #	Date	Time	Location	Minor Injuries	Major Injuries	Fatal Injuries	DUI	Violation
007	1/5/2018	0:00	Wildwood / City Lot	0	0	0	No	CVC22107: Unsafe lane change
075	2/26/2018	11:20	Pacific	0	0	0	No	CVC22106: Unsafe starting or backing
117	3/28/2018	17:55	100 Monument Road	1	0	0	Yes	CVC23152(b): DUI
126	4/2/2018	17:01	582 Wildwood Ave	0	0	0	No	CVC20002: Misdemeanor Hit and Run
152	4/14/2018	9:00	Davis / Hwy 101 Ramp	0	0	0	Unknown	Unknown
176	4/28/2018	23:10	Martin Dr / Riverside	0	0	0	No	CVC22106: Unsafe starting or backing
209	5/15/2018	14:05	Davis / Dollar General	0	0	0	No	CVC24002: Operating an Unsafe Vehicle
385	8/23/2018	2:51	Bellevue Ave	0	0	0	Yes	CVC21658(a): Lane Weaving
469	10/12/2018	8:10	300 Painter	1	0	0	No	CVC21801(a): Failure to yield when making a Left or U-turn
527	12/3/2018	18:40	Pacific	0	0	0	No	Unknown

2017 Traffic Accident Report

2017 Traffic Accident Report

Case #	Date	Time	Location	Minor Injuries	Major Injuries	Fatal Injuries	DUI	Violation
043	1/23/2017	20:32	400 Pacific Ave	0	0	0	No	CVC20002: Misdemeanor Hit and Run
250	5/19/2017	15:30	Wildwood / Davis Street	0	0	0	No	CVC21802(a): Failure to yield at intersection
291	5/28/2017	9:30	Bellevue Ave	0	0	0	No	CVC21658(a): Lane Weaving
401	7/30/2017	20:16	Ireland / Davis Street	0	0	0	No	CVC20002: Misdemeanor Hit and Run
415	8/7/2017	19:07	528 1st Street	0	0	0	Yes	CVC23152(e): DUI
431	8/15/2017	2:05	Painter	0	0	0	No	Unknown
553	10/8/2017	17:19	Stream / Ogle	0	0	0	No	Unknown
601	11/10/2017	10:30	400 Dixie Street	0	0	0	No	CVC21658(a): Lane Weaving
600	11/10/2017	6:25	2nd / Dixie	0	0	0	No	CVC21658(a): Lane Weaving
348	12/27/2017	19:50	Sequoia	0	0	0	Yes	CVC23152(a): DUI

2016 Traffic Accident Report

2016 Traffic Accident Report

Case #	Date	Time	Location	Minor Injuries	Major Injuries	Fatal Injuries	DUI	Violation
011	1/9/2016	21:35	Davis	0	0	0	No	CVC22107: Unsafe lane change
093	3/2/2016	13:00	Eeloa	0	0	0	No	CVC20002:Misdemeanor Hit and Run
104	3/6/2016	13:20	Berkeley / 1st Ave	0	0	0	Unknown	Unknown
292	6/14/2016	14:30	1016 Riverside Dr	0	0	0	Unknown	CVC21658(a): Lane Weaving
293	6/14/2016	17:45	Eeloa / Fern St	0	0	0	No	CVC21658(a): Lane Weaving
295	6/14/2016	20:50	Center / Rigby Ave	0	0	0	Yes	CVC22350: Unsafe Speed
328	7/3/2016	15:00	Davis / Wildwood Ave	0	1	0	No	CVC22350: Unsafe Speed
335	7/7/2016	15:20	Davis / Wildwood Ave	1	0	0	No	CVC21802(a): Failure to yield at intersection
364	7/24/2016	22:01	1st Ave / 100 Elko	0	0	0	Unknown	CVC22450: Running a Stop Sign
368	7/25/2016	6:00	Bellevue / DDS Shin	0	0	0	No	Unknown
374	7/31/2016	19:00	1241 Eeloa	1	0	0	Yes	CVC23152(a): DUI
551	10/28/2016	15:40	Painter / Ireland St	0	0	0	No	CVC25250: Flashing Lights on Vehicle

