



# MORRO BAY

## Local Roadway Safety Plan

February 2024



Morro Bay  
*California*





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## Public Agency Working Group

### City of Morro Bay

- Mayor Carla Wixom
- Mayor Pro Tem Zara Landrum
- Councilmember Laurel Barton
- Councilmember Cyndee Edwards
- Councilmember Jennifer Ford
- Yvonne Kimball - City Manager
- Eric Riddiough, PE – City Engineer
- Greg Kwolek- Public Works Director
- Janeen Burlingame – Management Analyst

### Morro Bay Police Department

- Tony Mosqueda – Police Commander
- Amy Watkins – Police Chief

### San Luis Coastal Unified School District

- Ryan Pinkerton
- Scott Schalde

### Fire Department

- Matt Vierra – Fire Marshall
- Daniel McCrain – Fire Chief

### City of Morro Bay Community Development

- Cindy Jacinth – Planning Manager

### City of Morro Bay Public Works Advisory Board

- John Erwin

### San Luis Obispo Council of Governments

- John DiNunzio – Transportation Planner
- William Johnson – CTAC Member

### Caltrans District 5

- Diane Dostalek –Transportation Engineer

### Bike SLO County

- Rick Ellison –Executive Director

## Consultant Team

### Kimley-Horn:

- Kyle McGowan, AICP
- Mike Colety, PE
- Darryl, DePencier, AICP, GISP, RSP2B
- Abbey Ibarra
- Tyler Lindberg, AICP





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SIGNED BY

  
Michael Colety, P.E., PTOE, RSP<sub>2BI</sub>



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## Table of Contents

|  |      |
|--|------|
| Executive Summary .....                            | ES-1 |
| 1. Introduction .....                              | 1    |
| 2. Vision and Goals .....                          | 2    |
| Objectives: .....                                  | 3    |
| 3. Process .....                                   | 3    |
| 3.1 Guiding Manuals .....                          | 4    |
| 3.1.1 Local Roadway Safety Manual .....            | 4    |
| 3.1.2 Highway Safety Manual .....                  | 5    |
| 3.2 Analysis Techniques .....                      | 6    |
| 3.2.1 Crash and Network Screening Analysis .....   | 6    |
| 3.2.2 Statistical Performance Measures .....       | 7    |
| 3.3 Future Analysis .....                          | 10   |
| 4. Public Engagement and Agency Coordination ..... | 11   |
| 4.1 Public Engagement .....                        | 11   |
| Online Engagement .....                            | 11   |
| Public Workshops/Meetings .....                    | 11   |
| 4.2 Agency Working Group Coordination .....        | 12   |
| 5. Existing Efforts .....                          | 13   |
| 6. Data Summary .....                              | 17   |
| 6.1 Roadway Network .....                          | 17   |
| 6.2 Crash Data .....                               | 18   |
| 7. Crash Safety Trends .....                       | 22   |
| 7.1 All Crashes .....                              | 22   |
| 7.2 Fatalities & Severe Injuries .....             | 23   |
| 7.3 Injury Levels .....                            | 23   |
| 7.4 Cause of Crash .....                           | 24   |
| 7.5 Vulnerable Users .....                         | 25   |
| 7.5.1 Pedestrian Crashes .....                     | 25   |
| 7.5.2 Bicycle Crashes .....                        | 25   |



|   |           |
|---|-----------|
| 7.6 Time of Day .....   | 27        |
| 7.7 Other Significant Trends .....  | 27        |
| 7.8 Driver Age.....   | 27        |
| 7.9 Statewide Comparison .....  | 27        |
| 7.10 Crash Network Screening Analysis Results .....                           | 28        |
| <b>8. Best Practices Evaluation and Emphasis Areas .....</b>                  | <b>36</b> |
| 8.1 Best Practices Evaluation .....   | 36        |
| 8.2 Emphasis Areas.....   | 39        |
| 8.2.1 Emphasis Area #1: Speeding .....  | 39        |
| 8.2.2 Emphasis Area #2: Cut-through Traffic .....                             | 40        |
| 8.2.3 Emphasis Area #3: Drivers Ignoring Signals and Stop Signs.....          | 40        |
| 8.2.4 Emphasis Area #4: Lighting.....   | 40        |
| 8.2.5 Emphasis Area #5: Pedestrian Safety .....                               | 41        |
| 8.2.6 Emphasis Area #6: Bicyclist Safety .....                                | 41        |
| <b>9. Potential Improvements.....</b>   | <b>42</b> |
| 9.1 Improvement (Countermeasure) Selection Process .....                      | 42        |
| 9.2 Infrastructure Improvements .....   | 42        |
| 9.3 Traffic Calming Improvements .....  | 55        |
| Traffic Calming Toolbox .....   | 55        |
| Traffic Calming Implementation Process .....                                  | 56        |
| 9.4 Non-Infrastructure Improvements.....                                      | 57        |
| <b>10. Funding Sources &amp; Next Steps .....</b>                             | <b>58</b> |
| 10.1 Funding Sources.....   | 58        |
| 10.1.1 Highway Safety Improvement Program (HSIP).....                         | 58        |
| 10.1.2 Caltrans Active Transportation Program.....                            | 59        |
| 10.1.3 California SB 1 .....  | 59        |
| 10.1.4 California Office of Traffic Safety Grants .....                       | 59        |
| 10.1.5 San Luis Obispo Council of Governments (SLOCOG) Regional Funding ..... | 60        |
| 10.1.6 Federal Emergency Management Agency (FEMA) Funding.....                | 60        |
| 10.1.7 Safe Streets and Roads for All (SS4A) Grant Program.....               | 60        |
| 10.1.8 Infrastructure Investment and Jobs Act .....                           | 62        |
| 10.2 Implementation Plan .....  | 62        |



|                                       |    |
|---------------------------------------|----|
| 10.2.1 Monitoring .....               | 62 |
| 10.2.2 Analysis Update .....          | 62 |
| 10.2.3 Implementation Strategies..... | 63 |
| 10.3 Next Steps .....                 | 64 |
| Appendices .....                      | 65 |



**LIST OF FIGURES**

Figure 1 – Critical Crash Rate Formula .....7  
 Figure 2 – Probability of Specific Crash Types Exceeding Threshold Proportion .....9  
 Figure 3 – Functional Classification & Signalized Intersections .....19  
 Figure 4 – All Crashes (2013-2022) .....20  
 Figure 5 – Fatal & Severe Injury Crashes (2013-2022).....21  
 Figure 6 – Crash Type by Year (2013-2022).....22  
 Figure 7 – Fatal & Severe Injury Crashes (2013-2022).....23  
 Figure 8 – Crashes by Injury Levels (2013-2022) .....24  
 Figure 9 – Pedestrian & Bicycle Crashes (2013-2022).....26  
 Figure 10 – Crash Network Screening Analysis Results (2013-2022).....29

**LIST OF TABLES**

Table 1 – Review of Existing City Plans .....13  
 Table 2 – Review of Existing City Projects.....16  
 Table 3 – Fatal and Severe Injury Crashes Categorized by Modes Involved (2013-2022)..23  
 Table 4 - Cause of Crashes (2013-2022) .....24  
 Table 5 - Comparison of Statewide and Morro Bay Fatal & Severe Injury Crashes .....28  
 Table 6– Analysis Results: Intersections .....31  
 Table 7 – Analysis Results: Segments .....35  
 Table 8 – Summary of Program, Policies, and Practices .....36  
 Table 9 – Prioritized List of Projects.....44  
 Table 10 - Traffic Calming Toolbox.....55  
 Table 11 – Non-Engineering Safety Strategy Countermeasures .....57  
 Table 12 – SS4A Self-Certification Eligibility Table .....61

## Executive Summary

Morro Bay has created a Local Roadway Safety Plan (LRSP), which identifies a framework to identify, analyze, and develop traffic safety enhancements on the City's roadway network. The LRSP was developed in response to local issues and needs. Through the analysis, this report has identified emphasis areas to inform and further guide safety evaluation and planning for the City's transportation network. The LRSP also analyzes crash data on an aggregate basis as well as at specific locations to identify high-crash locations, high-risk locations, and citywide trends and patterns. The analysis of crash history on the City's transportation network allows for opportunities to:

1. Identify factors in the transportation network that inhibit safety for all roadway users;
2. Improve safety at specific high-crash locations, and;
3. Develop safety measures using the four E's of safety: Engineering, Enforcement, Education, and Emergency Response to encourage safer driver behavior and better severity outcomes.

With this LRSP, the City continues its safety efforts by identifying areas of emphasis and systematic recommendations to enhance safety.

The City's vision is to enhance the transportation network and reduce traffic fatalities and serious injury related crashes, and the goals for the City of Morro Bay include the following:

**Goal #1:** Identify areas with a high risk for crashes.

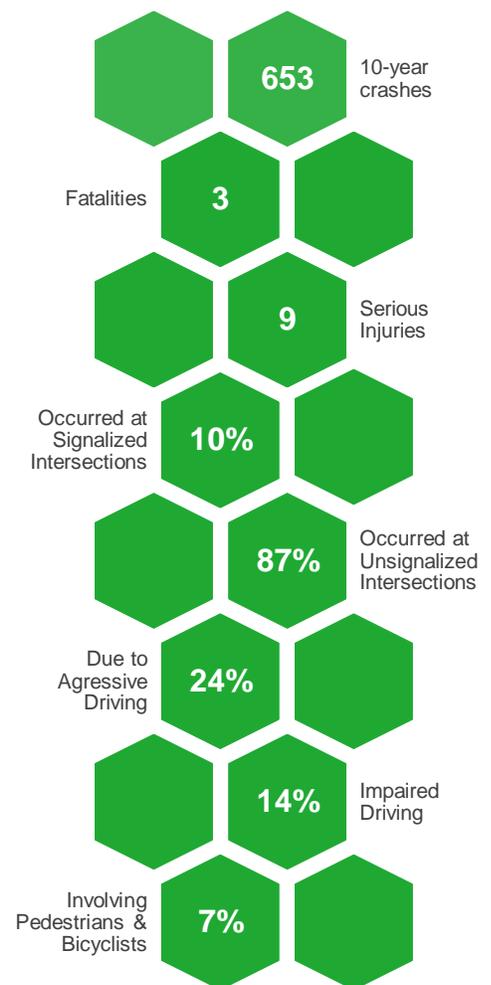
**Goal #2:** Illustrate the value of a comprehensive safety program and the systematic process.

**Goal #3:** Plan future safety improvements for near-, mid- and long-term.

**Goal #4:** Define safety projects for HSIP and other program funding consideration.

This LRSP analyzes the most recent 10-year range of crash data (January 1, 2013 – September 30, 2022) and roadway improvements to assess historic trends, patterns, and areas of increasing concern.

Further, the crash history was analyzed to identify locations with elevated risk of crashes either through their crash histories or their similarities to other locations with more active crash patterns. Using a network screening process,



Source: Morro Bay Crash Database (2013-2022)

locations were identified within the City that will most likely benefit from safety enhancements. Using historic crash data, crash risk factors for the entire network were derived. The outcomes informed the identification and prioritization of engineering and non-infrastructure safety measures to address certain roadway characteristics and related behaviors that contribute to motor vehicle crashes with active transportation users.

Emphasis areas were developed by revisiting the vision and goals developed at the onset of the planning process and comparing them with the trends and patterns identified in the crash analysis.

**Emphasis Area #1: Speeding**

**Emphasis Area #2: Cut-through Traffic**

**Emphasis Area #3: Drivers Ignoring Signals and Stop Signs**

**Emphasis Area #4: Lighting**

**Emphasis Area #5: Pedestrians**

**Emphasis Area #6: Bicyclists**

These locations were identified through the analysis process based on their crash histories, public engagement and input, the observed crash patterns, and their different characteristics to provide the most insight into potential systematic safety countermeasures that the City can employ to achieve the most cost-effective safety benefits. Countermeasures are subjected to a benefit/cost assessment and scored according to their potential return on investment. The potential benefit of these countermeasures at locations with similar design characteristics can then be extrapolated regardless of crash history, allowing for proactive safety enhancements that can prevent future safety challenges from developing. Additionally, this information can be used to help the City apply for grants and other funding opportunities to implement these safety improvements. These grants and funding opportunities include the Highway Safety Improvement Program (HSIP), administered by Caltrans, the Safe Streets for All (SS4A) program, administered by the federal government, and the Active Transportation Program (ATP) funds, which are administered by the State of California. There are also regional funding sources, administered by the San Luis Obispo Council of Governments (SLOCOG). The completion of an LRSP is required for some of these programs and will allow the City of Morro Bay to be eligible for these funds.

Near-term action items were identified to accelerate the City's achievement of the goals and vision of this LRSP. The City can:

- Actively seek other funding opportunities to improve safety for all modal users,
- Collaborate with established safety partners & neighboring municipalities as improvements are made to create a cohesive transportation network, and
- Iteratively evaluate existing and proposed transportation safety programs and capital improvements to design a safer transportation network in Morro Bay.
- These recommendations provide Morro Bay with a look-ahead for safety improvements that can be applied systematically. Additionally, this information can be used to help the

City apply for grants and other funding opportunities to implement these safety improvements.

- Establish a goal of zero traffic fatalities by the year 2050 consistent with statewide goals set by Caltrans.

An evaluation and implementation plan was created that identifies actionable items that will help the City achieve the goals and vision set out in this report. This section will lay out next steps for the City to continue to capitalize on the analysis and information provided in this report. It is recommended that the City Council formally adopt this plan, and to update the plan once every five years.



## 1. Introduction

This Local Road Safety Plan (LRSP) identifies emphasis areas to inform and guide further safety evaluation of the City's transportation network. The emphasis areas include the type of crash, focused locations, and notable relationships between current efforts and crash history. The LRSP analyzes crash data on an aggregate basis as well as at specific locations to identify high-crash locations, high-risk locations, and city-wide trends and patterns. The analysis of crash history throughout the City's transportation network allows for the following opportunities:

1. Identify factors in the transportation network that inhibit safety for all roadway users,
2. Improve safety at specific high-crash locations, and
3. Develop safety measures using the four E's of safety (Engineering, Enforcement, Education, and Emergency Response) to encourage safer driver behavior and better severity outcomes.

Morro Bay has taken steps to enhance all modal safety throughout the City and with this LRSP, Morro Bay is continuing to prioritize safety in its planning processes. The California Office of Traffic Safety most recently ranked Morro Bay 63 of 103 peer cities in 2020 for traffic injuries after normalizing for population and VMT, which suggests that the City is in the less-impacted half of its group for traffic injuries. Alcohol involved crashes is the lowest ranked in its peer group, followed by crashes with pedestrians under age 15.

Based on University of California Berkeley's Transportation Injury Mapping System (TIMS) and California Department of Transportation (Caltrans) Vehicle Operation Cost Parameters, Morro Bay's economic losses due to traffic injuries amounted to approximately \$53 million from 2013 to 2022. This report identifies factors associated with the most vehicle crashes particular to the City and proposes matching countermeasures to reduce or eliminate those crashes.

The intent of the LRSP is to:

- Create a greater awareness of road safety and risks;
- Reduce the number of fatal and severe-injury crashes;
- Develop lasting partnerships;
- Support for grant/funding applications; and
- Prioritize investments in traffic safety.



## 2. Vision and Goals

The Morro Bay LRSP evaluates the transportation network as well as non-infrastructure programs and policies within the City. Mitigation measures are evaluated using criteria to analyze the safety of road users (drivers, bicyclists, and pedestrians), the interaction of modes, the influences on the roadway network from adjacent municipalities, and the potential benefits of safety countermeasures. Through analysis of historical data and trends, community outreach and input, and proactive identification, safety opportunities can be identified and implemented without relying solely on a reaction and response to crashes as they occur.

As cities across the country have implemented LRSP' and systematically addressed the conditions leading to fatal and severe-injury crashes, the Federal Highway Administration (FHWA) has found that LRSPs effectively improve safety. LRSPs provide a locally developed and customized roadmap to directly address the most common safety challenges in the given jurisdiction. This project's vision, goals, and objectives have been established to reflect discussions with Morro Bay staff, various stakeholders identified by City staff, input from community members, and a review of existing plans/policies in the area.

**VISION:** *To enhance the transportation network for all users to move towards a goal of zero traffic fatalities and serious injuries*

This vision aligns with the San Luis Obispo Council of Governments (SLOCOG) Road to Zero Policy Commitment that was adopted in October 2023.

### **Goal #1: Identify areas with a high risk for crashes.**

#### **Objectives:**

- a. Evaluate the City's roadway network for crash activity.
- b. Identify intersections and segments in need of mitigation.
- c. Identify areas of interest with respect to safety concerns for pedestrians and bicycles.

### **Goal #2: Illustrate the value of a comprehensive safety program and the systematic process.**

#### **Objectives:**

- a. Demonstrate the systematic process' ability to identify locations with higher risk for crashes based on present characteristics closely associated with severe crashes.
- b. Demonstrate, through the systematic process, the gaps and data collection activities that can be improved upon.

### **Goal #3: Define safety improvements for the near-, mid- and long-term, including projects for HSIP, SS4A and other program funding consideration.**



## Objectives:

- a. Create the outline for a prioritization process that can be used in forth-coming funding cycles.
- b. Demonstrate the correlation between the proposed safety countermeasures with the Vision Zero Initiative and the California State Highway Safety Plan (SHSP).

## Goal #4: Identify emphasis areas to prioritize countermeasure application.

### Objectives:

- a. Use systematic crash analysis to identify emphasis areas.
- b. Prioritize emphasis areas for countermeasure development.
- c. Align emphasis areas with City goals & objectives.
- d. Align emphasis areas with current City areas of concern: speeding, cut-through traffic, drivers ignoring stop signs/signals, lighting, pedestrian safety, and bicycle safety.

## Goal #5: Proposed List of Conceptual Priority Projects for Implementation of Countermeasures.

### Objectives:

- a. Identify conceptual priority projects for implementation.
- b. Identify similar areas where countermeasures can be implemented.
- c. Prioritize these countermeasures for implementation based on cost, effort, and timeline.

## 3. Process

The primary goal for the City of Morro Bay and their safety partners is to provide safe, sustainable, and efficient mobility choices for their residents and visitors. Through the development and implementation of this LRSP, the City will continue its collaboration with safety partners to identify and discuss safety issues within the community.

Guidance on the LRSP process is provided at both the national (FHWA) and state (Caltrans) level, and both agencies have developed a general framework of data and recommendations for an LRSP.

FHWA encourages the following:

- The establishment of a working group (stakeholders) to participate in developing an LRSP.
- A review of crash, traffic, and roadway data to identify areas of concern.
- The identification of goals, priorities, and countermeasures to recommend improvements at spot locations, systematically, and comprehensively.

Caltrans guidance follows a similar outline with the following steps:



- Establish leadership.
- Analyze the safety data.
- Determine emphasis areas.
- Identify strategies.
- Prioritize and incorporate strategies.
- Evaluate and update the LRSP.

This LRSP documents the results of data and information obtained, including the preliminary vision and goals for the LRSP, existing safety efforts, initial crash analysis, and developed emphasis areas. The LRSP recommendations consider the four E's of traffic safety defined by the California Strategic Highway Safety Plan (SHSP): Engineering, Enforcement, Education, and Emergency Response.

### 3.1 Guiding Manuals

This section describes the analysis process undertaken to evaluate safety within Morro Bay at a systematic level. This report identifies specific locations within the City that will benefit from safety enhancements and derives crash risk factors based on historic crash data using a network screening process. The outcome will inform the identification and prioritization of engineering and non-infrastructure safety measures by addressing certain roadway characteristics and related driving behaviors contributing to crashes. This process uses the latest national and state best practices for statistical roadway analysis described.

#### 3.1.1 Local Roadway Safety Manual

The *Local Roadway Safety Manual: A Manual for California's Local Road Owners* (Version 1.6, April 2022) encourages local agencies to pursue a proactive approach when identifying and analyzing safety issues and preparing to compete for project funding opportunities. A proactive approach is the analyzation of safety in an entire roadway network through either a one-time network wide analysis or a routine analysis of the roadway network.<sup>1</sup>

According to the *Local Roadway Safety Manual* (LRSM), “the California Department of Transportation (Caltrans) – Division of Local Assistance is responsible for administering California’s federal safety funding intended for local safety improvements.”

To provide the most beneficial and competitive funding approach, the analysis leading to countermeasure selection should focus on both intersections and roadway segments and maintain consideration of roadway characteristics and traffic volumes. The result should reflect a list of locations that are most likely to benefit from cost-effective countermeasures, preferably prioritized by benefit/cost ratio. The manual suggests using a mixture of quantitative and

<sup>1</sup> Local Roadway Safety Manual (Version 1.6) 2022. Page 5.



qualitative measures to identify and rank locations using both crash frequency and crash rates. These findings should then be screened for crash type and severity patterns to determine the cause of crashes and the potential effective countermeasures. Qualitative analysis should include field visits and a review of existing roadway characteristics and devices. The specific roadway context can then be used to assess conditions that may decrease safety at the site and at systematic levels.

Countermeasure selection should be supported using Crash Modification Factors (CMFs). These factors are a peer reviewed product of research quantifying the expected rate of crash reduction expected from a given countermeasure. If more than one countermeasure is under consideration, the LRSM provides guidance on appropriate application of CMFs.

### 3.1.2 Highway Safety Manual

The American Association of State Highway and Transportation Officials (AASHTO) *Highway Safety Manual* (HSM), published in 2010, presents a variety of methods for quantitatively estimating crash frequency or severity at a variety of locations.<sup>2</sup> This four-part manual is divided into the following parts: A) Introduction, Human Factors, and Fundamentals, B) Roadway Safety Management Process, C) Predictive Method, D) Crash Modification Factors.

In Chapter 4 of Part B in the HSM, the “Network Screening Process” is a tool for an agency to analyze the entire network and identify/rank locations that are most likely or least likely to realize a reduction in the frequency of crashes.

The HSM identifies five steps in this process:<sup>3</sup>

- 1. Establish Focus:** Identify the purpose or intended outcome of the network screening analysis. This decision will influence data needs, the selection of performance measures and the screening method that can be applied.
- 2. Identify Network and Establish Reference Populations:** Specify the types of sites or facilities being screened (i.e., segments, intersections, geometrics) and identify groupings of similar sites or facilities.
- 3. Select Performance Measures:** There are a variety of performance measures available to evaluate the potential to reduce crash frequency at a site. In this step, the performance measure is selected as a function of the screening focus and the data and analytical tools available.

<sup>2</sup> AASHTO, *Highway Safety Manual*, 2010, Washington D.C., <http://www.highwaysafetymanual.org/Pages/About.aspx>

<sup>3</sup> AASHTO. *Highway Safety Manual*. 2010. Washington, DC. Page 4-2.



4. **Select Screening Method:** There are three principal screening methods described in this chapter (i.e., ranking, sliding window, peak searching). Each method has advantages and disadvantages; the most appropriate method for a given situation should be selected.
5. **Screen and Evaluate Results:** The final step in the process is to conduct the screening and analysis and evaluate the results.

The HSM provides several statistical methods for screening roadway networks and identifying high risk locations based on overall crash histories.

## 3.2 Analysis Techniques

### 3.2.1 Crash and Network Screening Analysis

Intersections and roadways were analyzed using four crash metrics:

- Number of Crashes
- Critical Crash Rate (HSM Ch. 4)
- Probability of Specific Crash Types Exceeding Threshold Proportion (HSM Ch. 4)
- Equivalent Property Damage Only (HSM Ch. 4)

The initial steps of the crash analysis established sub-populations of roadway segments and intersections that have similar characteristics. For this study, intersections were grouped by their control type (Signalized, Unsignalized, or Roundabout) and segments by their roadway category (Other Principal Arterial, Minor Arterial, Collector, or Local Streets). Individual crash rates were calculated for each sub-population. The population level crash rates were then used to assess whether a specific location has more or fewer crashes than expected. These sub-populations were also used to determine typical crash patterns to help identify locations where unusual numbers of specific crash types are seen.

The network screening process ranks intersections and roadway segments by the number of crashes that occurred at each one over the analysis period, and then identifies areas that had more of a given type of crash than would be expected for that type of location. These crash type factors were 1) crash injury (fatal, serious injury, other visible injury, complaint of pain, property damage only), 2) crash type (broadside, rear-end, sideswipe, head-on, hit object, overturned, bicycle, pedestrian, other), 3) environmental factors (lighting, wet roads), 4) driver behavior (aggressive), and 5) driver impairment. With these additional factors, the locations were further analyzed and assigned a new rank.

From the results of the network screening analyses, a short-list of locations was chosen based on crash activity, crash severity, crash patterns, location type, and area of the City of Morro Bay to provide the greatest variety of locations covering the widest range of safety opportunities for safety toolbox development. The intent is to populate the safety toolbox with mitigation measures that will be applicable to most of the crash activity in the city. As a result, ten locations have been selected for mitigation analysis.



## 3.2.2 Statistical Performance Measures

### Critical Crash Rate (CCR)

Reviewing the number of crashes at a location is a method used to understand the cost to society incurred at the local level; however, it does not give a complete indication of the level of risk for those who use that intersection or roadway segment daily. The Highway Safety Manual describes the Critical Crash Rate method which provides a statistical review of locations to determine where risk is higher than that experienced by other similar locations. It is also the first step in analyzing for patterns that may suggest systematic issues that can be addressed at that location, and proactively at others to prevent new safety challenges from emerging.

The Critical Crash Rate compares the observed crash rate to the expected crash rate at a location based on facility type and volume using a locally calculated average crash rate for the specific type of intersection or roadway segment being analyzed. Based on traffic volumes and a weighted citywide crash rate for each facility type, a critical crash rate threshold is established at the 95% confidence level to determine locations with higher crash rates that are unlikely to be random. The threshold is calculated for each location individually based on its traffic volume and the crash profile of similar facilities.

**Figure 1 – Critical Crash Rate Formula**

$$R_{c,i} = R_a + \left[ P \times \sqrt{\frac{R_a}{MEV_i}} \right] + \left[ \frac{1}{(2 \times (MEV_i))} \right]$$

Where,

$R_{c,i}$  = Critical crash rate for intersection  $i$

$R_a$  = Weighted average crash rate for reference population

$P$  =  $P$ -value for corresponding confidence level

$MEV_i$  = Million entering vehicles for intersection  $i$

SOURCE: HIGHWAY SAFETY MANUAL

### DATA NEEDS

CCR can be calculated using:

- Daily entering volume for intersections, or VMT for roadway segments.
- Intersection control types to separate them into like populations.
- Roadway functional classification to separate them into like populations.
- Crash records in GIS or tabular form including coordinates or linear measures.

### STRENGTHS



- Reduces low volume exaggeration.
- Considers variance.
- Establishes comparison threshold.

### **CCR Methodology**

The Process of analyzing the CCR and comparing locations (separately by intersections and segments) is a multi-step process. The following is a high-level description of the process undertaken to develop the initial ranking of locations.

The first step in the process was to establish a city-wide crash rate for each facility population. These populations are broken into two categories with sub-categories:

- Intersection:
  - Signalized
  - Unsignalized
  - Roundabout
- Roadway Classification:
  - Other Principal Arterial
  - Minor Arterial
  - Collector
  - Local

The individual crash rate for each location was then calculated based on the associated traffic volume. This volume was either collected through data count resources or calculated based on the roadway classification. The next step was to establish a Significance Threshold. This Threshold was used to determine what level of exceedance (how much the crash rate exceeded the critical crash rate) a location must have based on traffic volume to provide a high level of confidence that the crash occurring at the location is not random. For this study, a confidence level of 95% was used. The local crash rates were then compared to Significance Threshold to see if each location exceeded the expected CCR and if so, by how much. After this analysis was completed, the locations were ranked by their categories according to that level of exceedance.

### **Equivalent Property Damage Only (EPDO)**

The equivalent property damage only (EPDO) method is described in the Highway Safety Manual. This method assigns weighting factors to crashes based on injury level (severe, injury, property damage only) to develop a property damage only score. In this analysis, the injury crash costs were calculated for each location (based on the latest Caltrans injury costs). This figure is then divided by the injury cost for a property damage only crash. The resulting number is the equivalent number of property damage only crashes at each site. This figure allows all locations to be compared based on injury crash costs. (Highway Safety Manual, Chapter 4).



## Probability

The Highway Safety Manual describes the methodology for determining the probability that crash type is greater than an identified threshold proportion. This helps to identify locations where a crash type is more likely to occur.

## DATA NEEDS

The probability of a specific crash type can be determined using crashes records with location data, and classifications of the locations (intersections or segments) studied.

## STRENGTHS

- Can be used as a diagnostic tool.
- Considers variance in data.
- Not affected by selection bias.

The HSM methodology first determines the frequency of a specific crash type at an individual location, then determines the observed proportion of that crash type relative to all crash types at that location. A threshold proportion is then determined for the specific crash type; HSM suggests utilizing the proportion of the crash type observed in the entire reference population (e.g. throughout the entire City of Morro Bay).

These proportions are then utilized to determine the probability that the proportion of a specific crash type is greater than the long-term expected proportion of that crash type.

**Figure 2 – Probability of Specific Crash Types Exceeding Threshold Proportion**

$$P(p_i > \overline{p^*}_i / N_{observed,i} / N_{observed,i(TOTAL)}) = 1 - \text{betadist}(\overline{p^*}_i, a + N_{observed,i}, \beta + N_{observed,i(TOTAL)} - N_{observed,i})$$

Where:

$\overline{p^*}_i$  = Threshold proportion

$p_i$  = Observed proportion

$N_{observed,i}$  = Observed target crashes for a site  $i$

$N_{observed,i(TOTAL)}$  = Total number of crashes for a site  $i$

SOURCE: HIGHWAY SAFETY MANUAL



### 3.3 Future Analysis

The City will conduct regular crash monitoring as described in **Section 10.2**. The City will then refresh the analysis and update the LRSP every 5 years to maintain eligibility for HSIP funding, as described in **Section 10.2**.



## 4. Public Engagement and Agency Coordination

Members of the public and local agency partners were included in the development of this report to ensure the local perspective was maintained at the forefront of planning efforts. A public agency working group of City Public Works staff and external representatives from the Morro Bay Police Department, San Luis Coastal Unified School District (SLCUSD), Morro Bay Fire Department, Morro Bay Public Works Advisory Board, San Luis Obispo Council of Government (SLOCOG), Bike SLO County, and Caltrans District 5.

The members of the public agency partners were called together to offer insight on the safety issues present in the City's transportation network. After the initial network screening and safety analysis, the results were presented to the public in a series of workshops. These workshops helped the project team gain insight into ongoing roadway safety issues in the City and potential solutions. City Public Works, the agency partners, and consultant staff met to discuss potential countermeasures and challenge areas through meetings in the field and virtually. Following these meetings, potential improvements were developed and presented to the public for comment, feedback, and discussion. The public engagement and agency coordination activities are discussed below.

### 4.1 Public Engagement

#### Online Engagement

The City of Morro Bay created a Local Roadway Safety Plan page on the City's website, which included information about the project, notifications about upcoming workshops and events, a project email address, and an interactive mapping activity and survey. The interactive map allowed members of the public to drop pins with categories (speed, bike, pedestrian, signage, etc.) on a map and leave comments and concerns about specific locations. The map also included a survey which asked residents about concerns and priorities. The interactive map and survey were live from September 1, 2023, through December 1, 2023, and the interactive map received 215 comments and the survey received 69 responses. The most common items shared in the map tool and surveys included speeding, cut-through traffic, and pedestrian and bicyclist safety. Specific commonly reported areas of concern included the Morro Bay Blvd and Quintana Rd roundabout, the Highway 1/Highway 41 interchange, and sections of Main Street, Quintana Road, and South Bay Boulevard. The results of the online engagement helped to inform the emphasis areas and potential improvements which are identified later in this report. A summary of the online engagement can be found in **Appendix A** of this report. Even though the map is closed for input, the reported areas on the interactive map can be found at: <https://engagekh.com/morro-bay-lrsp/morro-bay-lrsp-map#/>

#### Public Workshops/Meetings

Three public workshops/meetings were held to help the project team understand public areas of concern, create public awareness of the plan, and to keep members of the public informed with the direction of the plan and the City's response to roadway safety issues from input received



from the public. All workshops/meetings were advertised at least one month prior to the event on the City main page and LRSP website with quick reminders sent out within two weeks of the event on social media, Next Door, and on the City’s “Hot Topics” news scroll.

The first public workshop was held on Wednesday, September 6<sup>th</sup>, 2023, at the Veterans Memorial Building. The goal of this workshop was to introduce the project, present the crash analysis and other data, document and discuss resident concerns, and brainstorm potential improvements. The main concerns expressed at this workshop included speeding, cut-through traffic, roadway visibility, and safety issues at specific locations.

The second public workshop was held on Thursday, November 9<sup>th</sup>, 2023, at the Morro Bay Community Center. The goal of this workshop was to review major concerns heard from the online map and survey engagement, email correspondence, and phone calls. Additionally, ideas from the first workshop were discussed as well as potential improvements and countermeasures and locations where community members would like to see specific improvements made. Interactive boards were displayed at the workshop, which allowed members of the public to express concerns and pinpoint potential improvements in the City. The results of this workshop along with all of the upfront analysis helped to inform the countermeasure development that is discussed later in this report.

The final public meeting and opportunity for input was held at a special meeting of the Public Works Advisory Board (PWAB) on Wednesday, December 6<sup>th</sup>, 2023, at the Veterans Memorial Building. The goal of this meeting was to present and discuss the refined potential improvements and projects that were identified from data analysis and public input with agency partner feedback before development of the draft LRSP. Members of the PWAB and the public commented and discussed the potential improvements. These comments were documented and utilized by the LRSP team to further refine the projects that were developed for this plan.

The draft LRSP was posted to the City’s LRSP website in early January of 2024 for public viewing and comment. Comments were received by the LRSP Team at the project email up until the document was finalized in early February prior to adoption by the City Council.

## **4.2 Agency Working Group Coordination**

Three meetings with the public agency partners working group were held in order to gain the perspective and expertise of local subject matter experts and to help guide the plan as it was being developed.

The first public agency working group meeting was held on Thursday, September 7<sup>th</sup>, 2023. The group was introduced to the project and concerns about roadway safety in Morro Bay were discussed. The working group then performed a field visit and walking tour of various locations through the City including Morro Bay Boulevard, Main Street, and the Embarcadero. The group was also asked to report on the other potential project locations based upon incident history and



provide feedback. The discussions during the field visits and feedback from the working group’s comments helped to inform the project development that will be discussed later in this plan.

The second public agency working group meeting was held virtually on Wednesday, November 15<sup>th</sup>, 2023. The purpose of the meeting was to discuss concerns and issues expressed in the public workshops and to review potential improvements, countermeasures, and projects in more detail.

The third public agency working group meeting was held virtually on Wednesday, January 10<sup>th</sup>, 2024. The draft LRSP was presented and discussed with the group for input as it was made available to the public for comment.

## 5. Existing Efforts

Existing plans, policies, and projects that were recently completed, planned, or on-going were compiled at the start of the LRSP process to gain perspective on the existing efforts for transportation-related improvements within the City. High-level key points regarding transportation improvements and safety-related topics were identified to inform decision making in this LRSP. **Table 1** outlines the relevant existing City and regional plans and their applicable content.

**Table 2** outlines the relevant existing/past City projects and their timelines (Future projects only reflect those that were established in prior plans such as the 2011 Bike and Ped Master Plan and do not reflect projects proposed with the LRSP).

**Table 1 – Review of Existing City Plans**

| Document Name                      | Transportation Policies/Improvements  |
|------------------------------------|---|
| Plan Morro Bay General Plan (2021) | <ul style="list-style-type: none"> <li>The Plan Morro Bay is a planning document which serves as a guide to the community’s vision until 2040. This plan has two parts, the Blueprint plan and the Greenprint plan where the first plan considers the development aspects while the latter considers conservation aspects.</li> <li>The Blueprint plan allows the city to better plan the community goals and direct physical, economic, and social development in the community. The plan demonstrates growth goals pertaining to timeline, locations, and directions of growth to better grow and transform into a better-balanced community.</li> <li>The Greenprint plan is a directional framework for utilization, management, and protection of current and future resources. It also plans for conservation of natural habitats, recreational amenities, and the public safety of the community.</li> </ul> |



| Document Name   | Transportation Policies/Improvements   |
|---|--|
| 2022 Pavement Management Program Update   | <ul style="list-style-type: none"> <li>This plan gives an update on current pavement condition and projected deterioration over time and associated costs and pavement treatments.</li> <li>The program is used as a budgeting tool by analyzing historical data for certain areas to create cost estimates and budgets for project bids by various agencies. The program is also used as an inventory tool to find uses and pavement areas.</li> <li>The program provides useful information on pavement condition and deterioration using attributes such as age, load utilization, and climate effects.</li> </ul>  |
| Morro Bay Bicycle & Pedestrian Master Plan (2011)   | <ul style="list-style-type: none"> <li>The City of Morro Bay Bicycle Transportation Plan guides the future development of bicycle facilities and programs in the city that will help residents and visitors of all ages with safe, convenient, and attractive transportation methods. The plan aims to make walking and bicycling within the city an essential component of the community all while increasing circulation.</li> <li>The plan outlines a goal to increase the city's circulation by 50% by 2016.</li> <li>This plan has not been updated in recent years.</li> </ul>   |
| Downtown Waterfront Strategic Plan (2018)   | <ul style="list-style-type: none"> <li>The plan outlines how to enhance and connect walkways in Morro Bay's downtown and waterfront areas between 2023 and 2028.</li> <li>The plan outlines visions, goals, and strategies needed to achieve a unified community by implementing certain projects at various locations to upkeep the image of the community by investing in renovations to streets, parks, and buildings. With commitment to the public and private alike, a new partnership will be formed to culture improvements across the area.</li> </ul>  |
| San Luis Obispo Council of Governments 2021 Regional Active Transportation Plan             | <ul style="list-style-type: none"> <li>The 2021 Regional Active Transportation Plan (ATP) lays out an actionable blueprint for the San Luis Obispo region, including the seven cities and unincorporated communities to create a healthy and appealing alternative to driving. The bicycle and pedestrian planning framework is based on extensive public participation and developed in coordination with local agencies. The plan includes adopting a regional policy for a "Towards Zero Deaths" safety target, for walking and bicycling, clarifying that traffic collisions of any kind, including those resulting in the fatality of a pedestrian or cyclist, are not acceptable.</li> </ul>   |
| 2023 San Luis Obispo County Regional Transportation Plan & Sustainable Communities Strategy | <ul style="list-style-type: none"> <li>The 2023 RTP, is the San Luis Obispo region's blueprint for a transportation system that enhances quality of life and meets the mobility needs of the region's residents and visitors, now and in the future. This blueprint offers the region's communities a mix of mobility options for people and goods – and makes a strong commitment to creating a more sustainable transportation system that maximizes choice, addresses transportation issues holistically, and is both visionary and attainable. This Plan looks to address our future transportation needs through year 2045.</li> <li>Our Plan coordinates land use, housing, and transportation planning to reduce the amount of time people spend on the road. This effort is part of a statewide strategy to reduce greenhouse gas emissions to meet our reduction targets, and it may help attract funding for our communities and streamline permitting processes.</li> </ul> |



| Document Name                            | Transportation Policies/Improvements  |
|--|---|
| 2016 San Luis Obispo County Bikeway Plan | <ul style="list-style-type: none"> <li>San Luis Obispo County prepared the Bikeways Plan to identify and prioritize bikeway facilities throughout the unincorporated area of the County including, bikeways, parking, connections with public transportation, educational programs, and funding.</li> <li>The goal of the plan is to accommodate increased bicycle usage for a mode split of 20% by 2035 by removing barriers that discourage bicycling and developing facilities that encourage bicycle use.</li> <li>Provide a safer bicycling environment toward zero deaths through engineering, education and enforcement programs consistent with the Strategic Highway Safety Plan.</li> </ul> |
| Parking Management Plan (2007)           | <ul style="list-style-type: none"> <li>The plan aims to create alternatives to address parking needs, educate the community on parking costs, and develop a management plan. The management plan aims to utilize current parking spaces more effectively by implementing supply and demand utilization strategies.</li> </ul>   |



**Table 2 – Review of Existing/Past City Projects**

| Project Name   | Timeline    | Transportation Policies/Improvements   |
|--|-------------|--|
| <b>Current</b>   |             |  |
| Highway 1/Highway 41/Main St Roundabout Project  | In Progress | Installation of a roundabout at the intersection of Highway 1/Highway 41/Main Street. Project approval and environmental process underway.                           |
| Main St and Quintana Rd Intersection Improvements  | In Progress | ADA and pedestrian facility improvements, audible push buttons, integration of bicycle facilities with bicycle path. Design to begin in 2024.                        |
| <b>Completed</b>   |             |  |
| Bike-Ped bridge over Morro Creek & connector paths to Atascadero Rd & Embarcadero        | Completed   | Class I bikeway on Embarcadero Road between Coleman Drive and Atascadero Road with bike-ped bridge over Morro Creek. Sharrows on Atascadero Road.                    |
| Safe bike and pedestrian route to Del Mar School on Greenwood                            | Completed   | Safe pedestrian route to Del Mar Elementary School on Greenwood. Crosswalk connecting to dead end with an entrance to Greenwood observed.                            |
| San Jacinto and Main/Alder   | Completed   | Class II bikeway on San Jacinto between Cedar Avenue and Main Street.  |
| Bike-Ped path through Power Plant  | Completed   | Class I bikeway between Main Street and Atascadero Road.   |
| Bikeway between HS and Hampton Inn/Morro Shores Inn at Atascadero Road                   | Completed   | Class II and Class I bikeways connecting High School to bike path between Atascadero Road and Quintana at Hampton Inn and Morro Shores Inn on Atascadero Road        |
| Connection to future MB/Cayucos Connector Trail - bike route on Sandalwood & Beachcomber | Completed   | Sharrows on Sandalwood and Beachcomber. Connect to Yerba Buena and Toro Lane down to North Point Natural Area Parking Lot. Walking trail to hiking path along coast. |
| Connection to south end of Class 1 MB High School  | Completed   | Class I bikeway from Southwest end of Cloister Park to Northeast corner of Morro Bay High School.  |
| City Park Transit Hub Improvements   | Completed   | Transit project that was completed in July 2023 to add ADA accessible transit hub with modern shelters.  |
| Morro Creek Bike & Ped Bridge  | Completed   | Constructed new bridge to close gap in North Coast Scenic Bikeway south of Lila Keiser Park.   |



| Project Name  | Timeline  | Transportation Policies/Improvements  |
|---|-----------|---|
| Wayfinding Signage Project  | Completed | Installation of new updated roadway directional signs in 2022 for guiding the driving and walking public to major City destinations                       |
| <b>Future</b>   |           |   |
| Bike Path Gap Closure   | Future    | Improve bike path, lanes and routes for MBHS through Beach tract towards Cayucos.   |
| CDBG Sidewalk Gap Closures  | Future    | Construct missing segments of sidewalk to improve ADA access.   |
| Striping Improvements Citywide  | Future    | Installation of additional bicycle/ped facilities including crosswalks, Class II lanes, sharrows, etc.  |
| San Jacinto and Main/Alder  | Future    | Add sidewalks on San Jacinto  |
| Provide bike box markings and bike signal loops at San Jacinto, Main & Quintana & Yerba Buena | Future    | Class II Bikeways but no bike box markings  |
| ADA compliant ramp up bluff from Embarcadero to Olive Street                                  | Future    | In a mission to make Embarcadero more pedestrian-friendly an ADA ramp was proposed to connect Olive Street and Embarcadero.                               |
| More marked crosswalks on Main Street south of downtown                                       | Future    | Crosswalks still needing marking south of downtown on Main Street include Marina Street, Driftwood Street, Anchor Street, South Street, and Olive Street. |
| Improve the sidewalk on Main St between Hwy 41 and Radcliffe                                  | Future    | Sidewalk improvement have been made as well as meandering sidewalks implemented.  |
| Ped path along Lower State Park Road  | Future    | No Pedestrian Path observed along Lower State Park Road.  |

## 6. Data Summary

This section describes the data sources used for the analysis process of this LRSP.

### 6.1 Roadway Network

The California Department of Transportation (Caltrans) California Road System (CRS) GIS database was used to build the base roadway network used for this analysis. Intersections and



roadway segments were divided into control and classification categories so that each set could have its own crash rates and be compared with similar facilities or control type. Functional Classifications were imported from the city's General Plan and confirmed by city staff. Information on intersection traffic control was provided by the city and included in the analysis network. The crash analysis requires each intersection to be classified by type: Signalized, Unsignalized, or Roundabout. **Figure 3** illustrates the City of Morro Bay's roadway functional classification and intersection control type, respectively, as used for this study.

## 6.2 Crash Data

Crash data was collected from Crossroads software for the period from January 1, 2013, through September 30, 2022, displayed in **Figure 4**. Ten years of data are utilized instead of the standard three years to provide more history to evaluate trends or patterns. Analysis of the raw crash data is the first step in understanding the specific and systematic challenges faced throughout the city. Analyzing the ten years of data provided insight on the crash trends and patterns detailed in **Section 7**. The locations of fatal and severe injury crashes are displayed in **Figure 5**. The fatal crash occurring on Highway 41 in November 2022 was included in the dataset.



Figure 3 – Functional Classification & Signalized Intersections

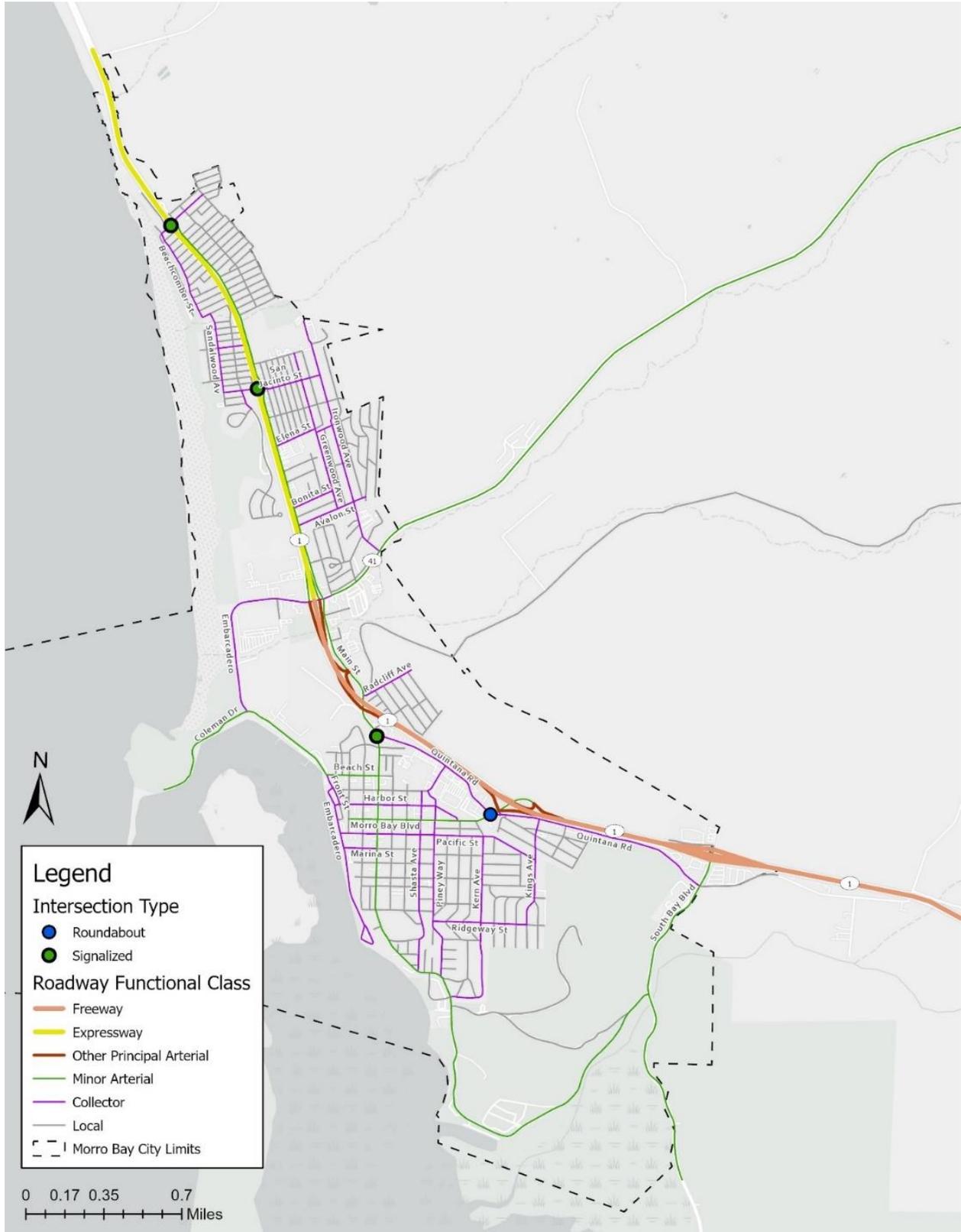




Figure 4 – All Crashes (2013-2022)

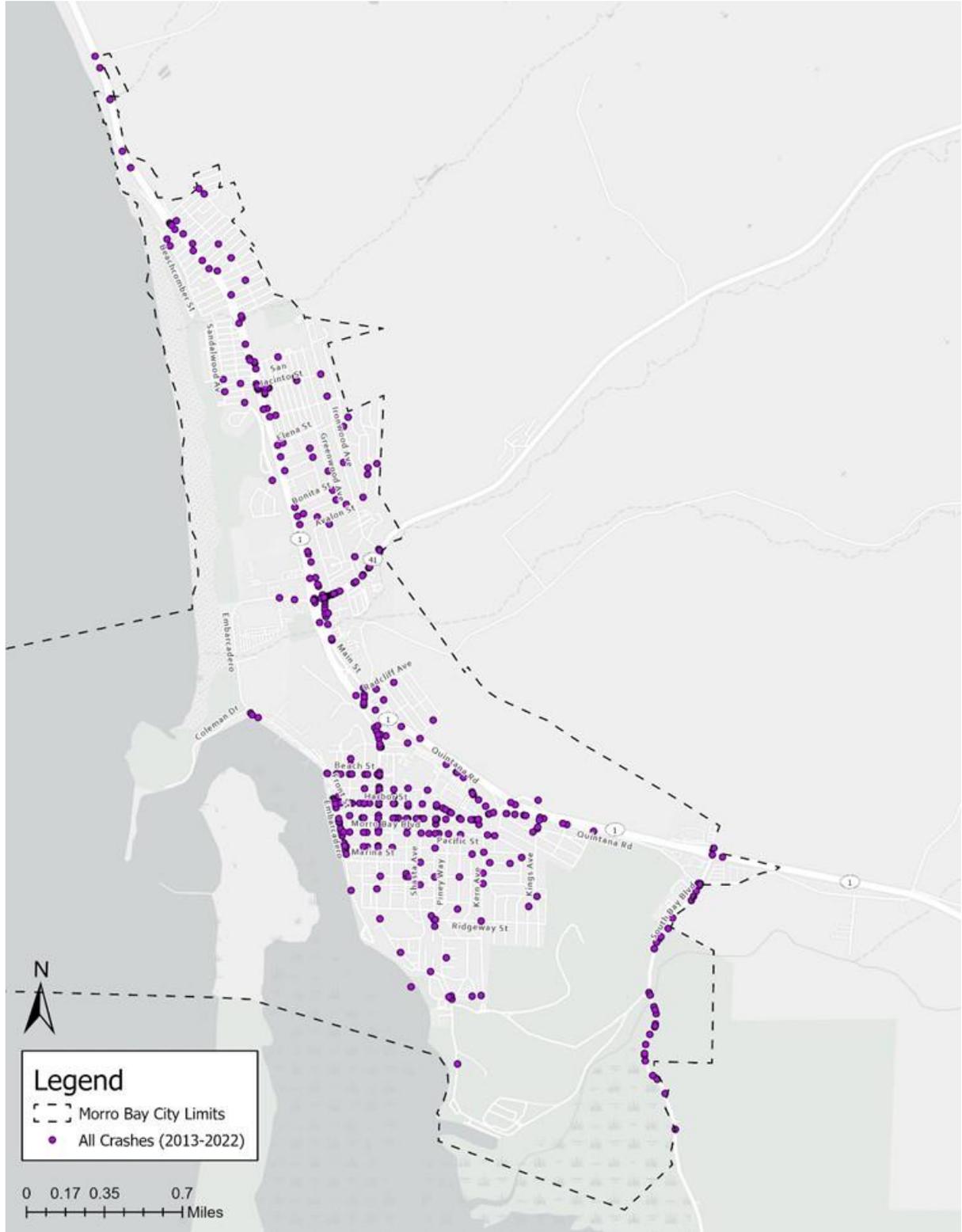
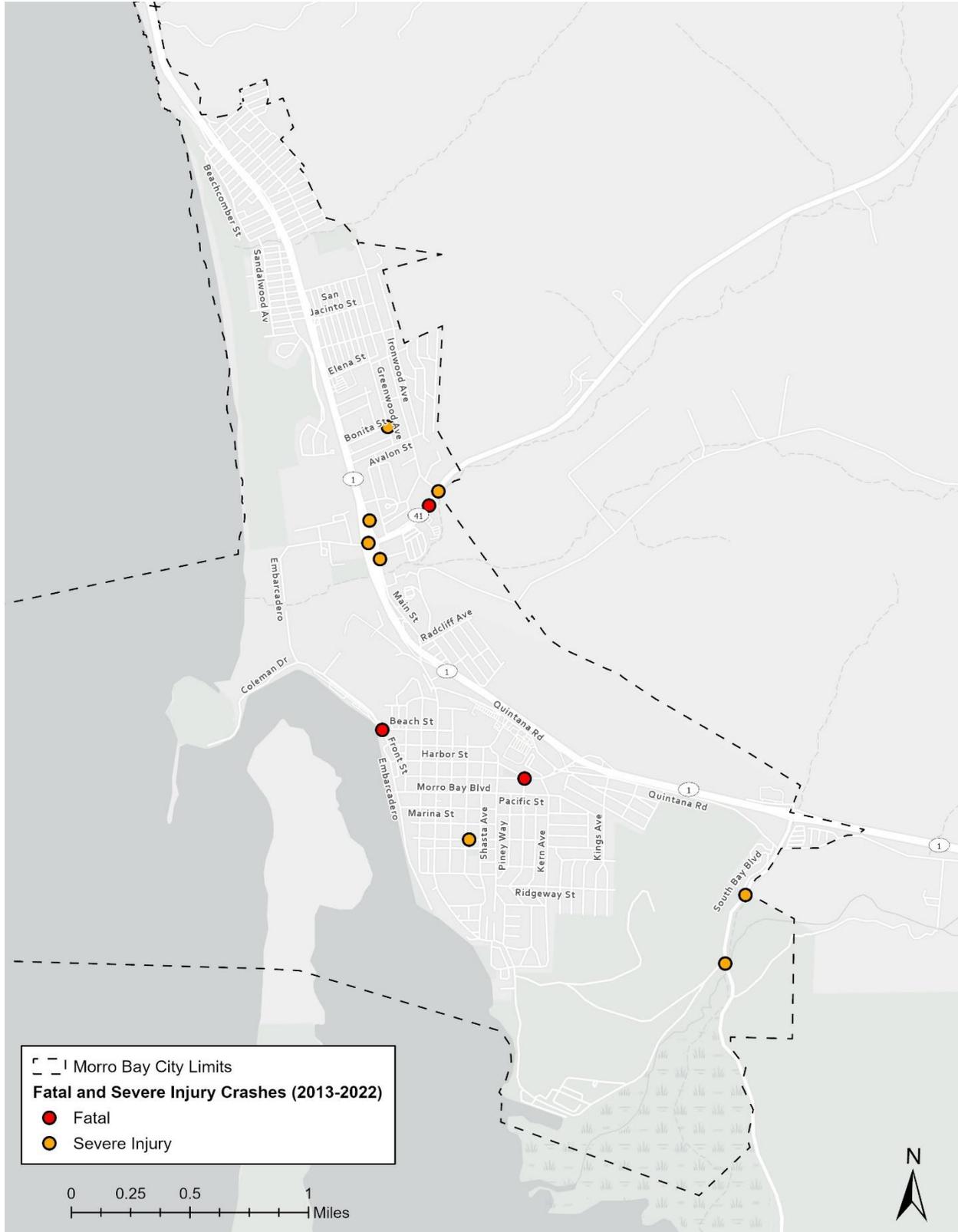




Figure 5 – Fatal & Severe Injury Crashes (2013-2022)





## 7. Crash Safety Trends

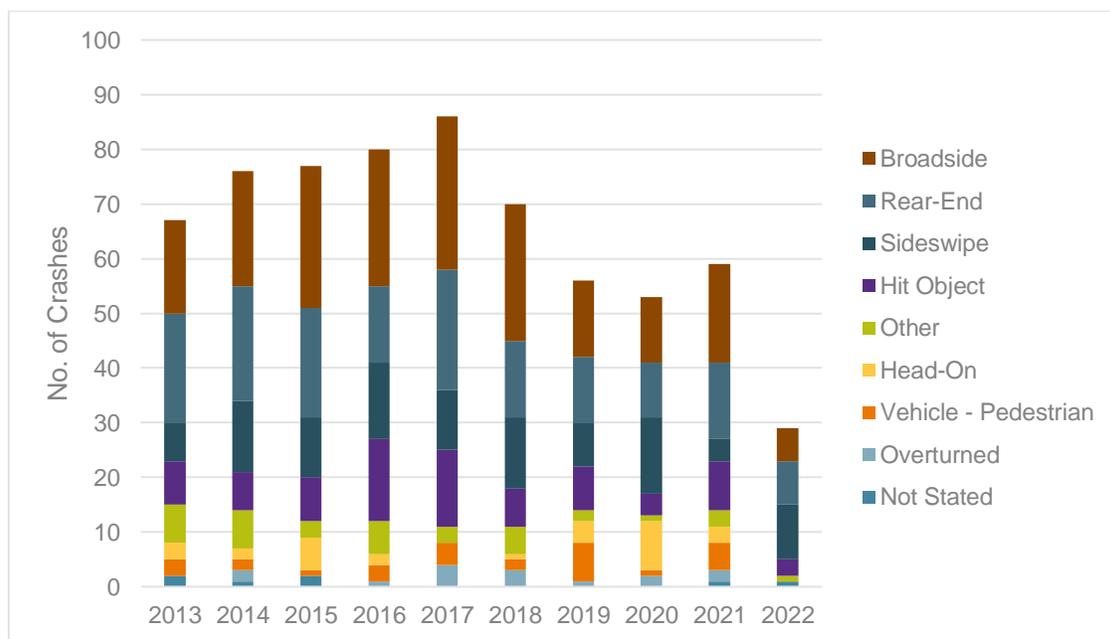
The analysis was conducted using a network screening process for the City-maintained roadway system based on crash records spanning from January 1, 2013 through September 30, 2022. This section contains the results of the analysis, which included the evaluation of Morro Bay’s fatal and serious injury (generally denoted as K+SI) crashes, statewide K+SI crashes, pedestrian crashes, bicycle crashes, crash severity levels, and crash causes.

### 7.1 All Crashes

This report utilized crash data for a ten-year period to provide a better understanding of trends and to reflect the patterns in crashes that have occurred on city streets. Data used for this report was extracted from Crossroads Software on July 24, 2023, and was current as of that date. Crash data from January 1, 2013, through September 10, 2022 (the most recent data available) as reported to Crossroads from the local enforcement indicated that during this time there were 653 crashes recorded within Morro Bay.

During this time, the most common occurring crash types were Broadsides (29%) and Rear-Ends (24%). The total number of crashes gradually increased in the first half of the study period before decreasing in the second half, as shown in **Figure 6**.

**Figure 6 – Crash Type by Year (2013-2022)**



Source: Morro Bay Crossroads Database (2013-2022)



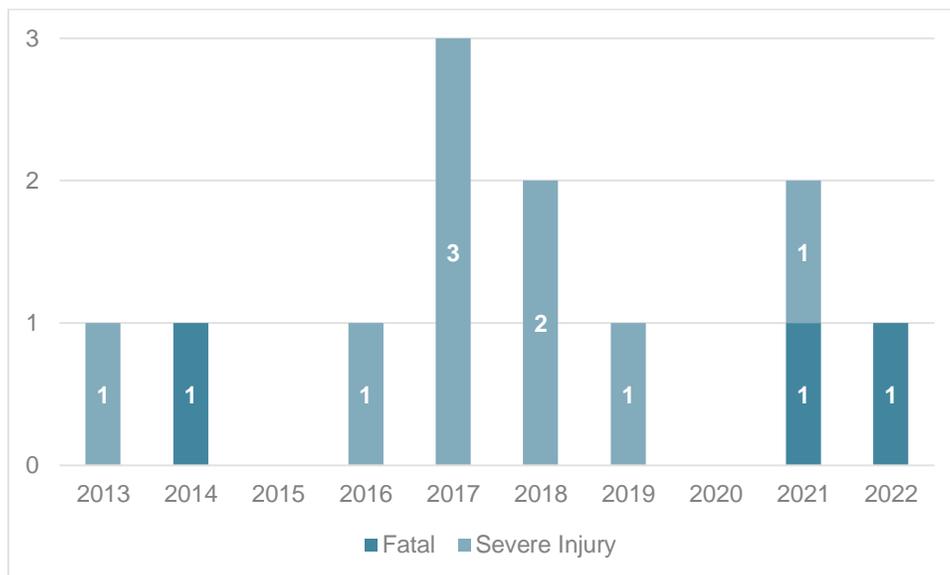
## 7.2 Fatalities & Severe Injuries

During the study period, 3 fatal crashes and 9 severe injury crashes occurred during the study period, as seen in **Figure 5. Table 3** outlines the fatal and severe injury crashes categorized by modes involved.

**Table 3 – Fatal and Severe Injury Crashes Categorized by Modes Involved (2013-2022)**

| Involved with       | # of Severe Injury Crashes | # of Fatal Crashes |
|---------------------|----------------------------|--------------------|
| Bicycle             | 1                          | 1                  |
| Fixed Object        | 2                          | 0                  |
| Other Motor Vehicle | 3                          | 1                  |
| Pedestrian          | 3                          | 1                  |
| <b>Total</b>        | <b>9</b>                   | <b>3</b>           |

**Figure 7 – Fatal & Severe Injury Crashes (2013-2022)**

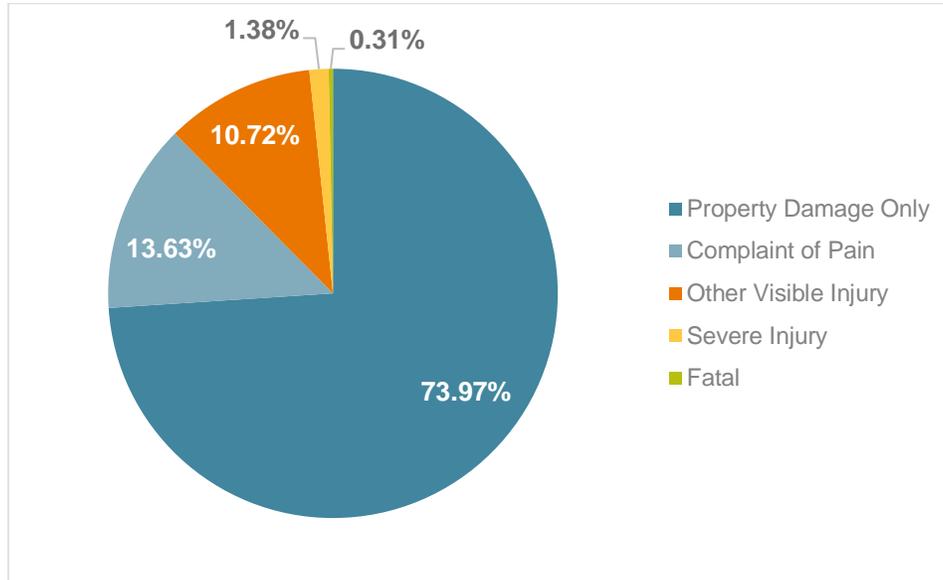


## 7.3 Injury Levels

As shown in **Figure 8**, 73.9% of the crashes reported during the time-period resulted in property damage only. Fatalities and severe injuries totaled 1.7% of all crashes.



**Figure 8 – Crashes by Injury Levels (2013-2022)**



Source: Morro Bay Crossroads Database (2013 – 2022)

## 7.4 Cause of Crash

The highest recorded cause of crashes in Morro Bay during this time period is automobile right-of-way violation at 20.4%, followed by Unsafe Speeds at 16.7% and Driving Under the Influence at 14.2%. Issues with Improper Turning also had a substantial impact on the City, comprising 12.4% of the crashes.

**Table 4 - Cause of Crashes (2013-2022)**

| Primary Crash Factor               | No. of Crashes | %     |
|------------------------------------|----------------|-------|
| Automobile right-of-way violations | 133            | 20.4% |
| Unsafe Speed                       | 109            | 16.7% |
| Driving Under Influence            | 93             | 14.2% |
| Improper Turning                   | 81             | 12.4% |
| Unsafe Starting or Backing         | 58             | 8.9%  |
| Unknown                            | 30             | 4.6%  |
| Following too closely              | 25             | 3.8%  |
| Traffic Signs and Signals          | 23             | 3.5%  |
| Wrong side of Road                 | 20             | 3.1%  |



| Primary Crash Factor     | No. of Crashes | %           |
|--------------------------|----------------|-------------|
| Ped R/W Violation        | 13             | 2.0%        |
| Other than Driver or Ped | 12             | 1.8%        |
| Pedestrian Violation     | 11             | 1.7%        |
| Unsafe Lane Change       | 9              | 1.4%        |
| Other                    | 9              | 1.4%        |
| Other Hazardous Movement | 8              | 1.2%        |
| Improper Passing         | 7              | 1.1%        |
| Hazardous Parking        | 4              | 0.6%        |
| Other Improper Driving   | 3              | 0.5%        |
| Other Equipment          | 3              | 0.5%        |
| Impeding Traffic         | 1              | 0.2%        |
| Brakes                   | 1              | 0.2%        |
| <b>Total</b>             | <b>653</b>     | <b>100%</b> |

Source: Morro Bay Police Department Crossroads Database (2013–2022)

## 7.5 Vulnerable Users

### 7.5.1 Pedestrian Crashes

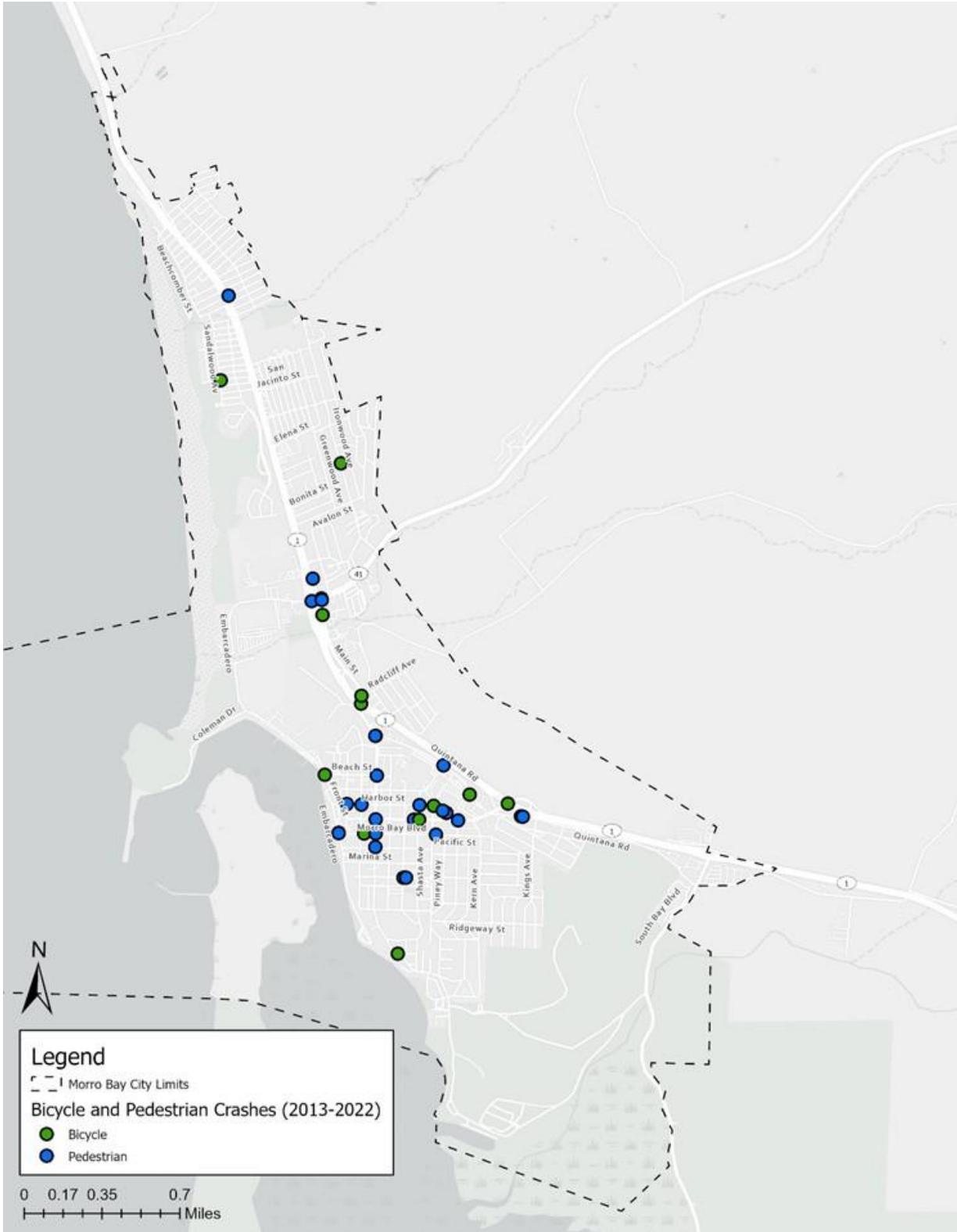
27 pedestrian involved crashes occurred during the study period, resulting in 1 fatal crash, 3 severe injuries, and 17 crashes with some form of reported injury or pain, and 6 pedestrian crashes resulting Property Damage Only. **Figure 9** shows the locations of pedestrian crashes during the study period.

### 7.5.2 Bicycle Crashes

During the study period, 19 crashes involving bicycles were reported. Of these, 1 were fatal, 1 resulted in severe injuries, 14 resulted in some forms of reported injury or pain, and 3 crashes resulted in Property Damage Only. **Figure 9** shows the location of bicycle crashes during the study period.



Figure 9 – Pedestrian & Bicycle Crashes (2013-2022)





## 7.6 Time of Day

Crashes in Morro Bay occurred more in the PM hours versus the AM hours, with 71% of crashes occurred in the PM hours, and 29% occurred in the AM hours. There were two peak periods of crash activity, from 7 AM to 9 AM, and from 11 AM to 5 PM. 12 PM and 5 PM were the most common time for crashes. A significant number of crashes also occurred in the nighttime hours. Twenty-eight percent (28%) of crashes occurred at night or during the dusk/dawn hours. Seven percent (7%) of crashes occurred at night where there were no streetlights.

## 7.7 Other Significant Trends

Aggressive driving and impaired driving are two important behavioral factors that often significantly contribute to crash patterns. These areas are studied in the analysis.

Caltrans defines aggressive driving as behaviors that include speeding, tailgating, and running stop signs or red lights. These behaviors contributed to 24% of the crashes in Morro Bay during the study period (2013-2022).

Impaired driving is defined by Caltrans as any instance where a driver, pedestrian, bicyclists, or motorcyclist is under the influence of alcohol, illicit drugs, or prescribed or over-the-counter medication. Eighteen percent (18%) of the crashes in Morro Bay during the study period (2013-2022) occurred where the driver had been drinking. Fourteen percent (14%) of the crashes in Morro Bay during the study period were directly related to impairment.

## 7.8 Driver Age

Two groups of drivers typically have a higher impact on the number of crashes. Aging Drivers (age 65 and up) and Young Drivers (ages 15-20) are more often found at fault for crashes they are involved in. The crash data for 2013-2022 period indicated that 21% of the crashes within Morro Bay involved Aging Drivers and 13% involved Young Drivers. These percentages are similar to those seen statewide.

## 7.9 Statewide Comparison

A comparison of fatal & severe injury crash data to the State averages were conducted for data from 2013-2022 (the most recent statewide data available). These numbers may vary slightly from those mentioned previously, due to the differences in the years of the study period. The following are areas where Morro Bay's crash rates are higher or lower than those of the State. These numbers specifically compare the proportion of fatal and serious injury crashes that have the characteristics listed in **Table 5**.



**Table 5 - Comparison of Statewide and Morro Bay Fatal & Severe Injury Crashes (2013-2022)**

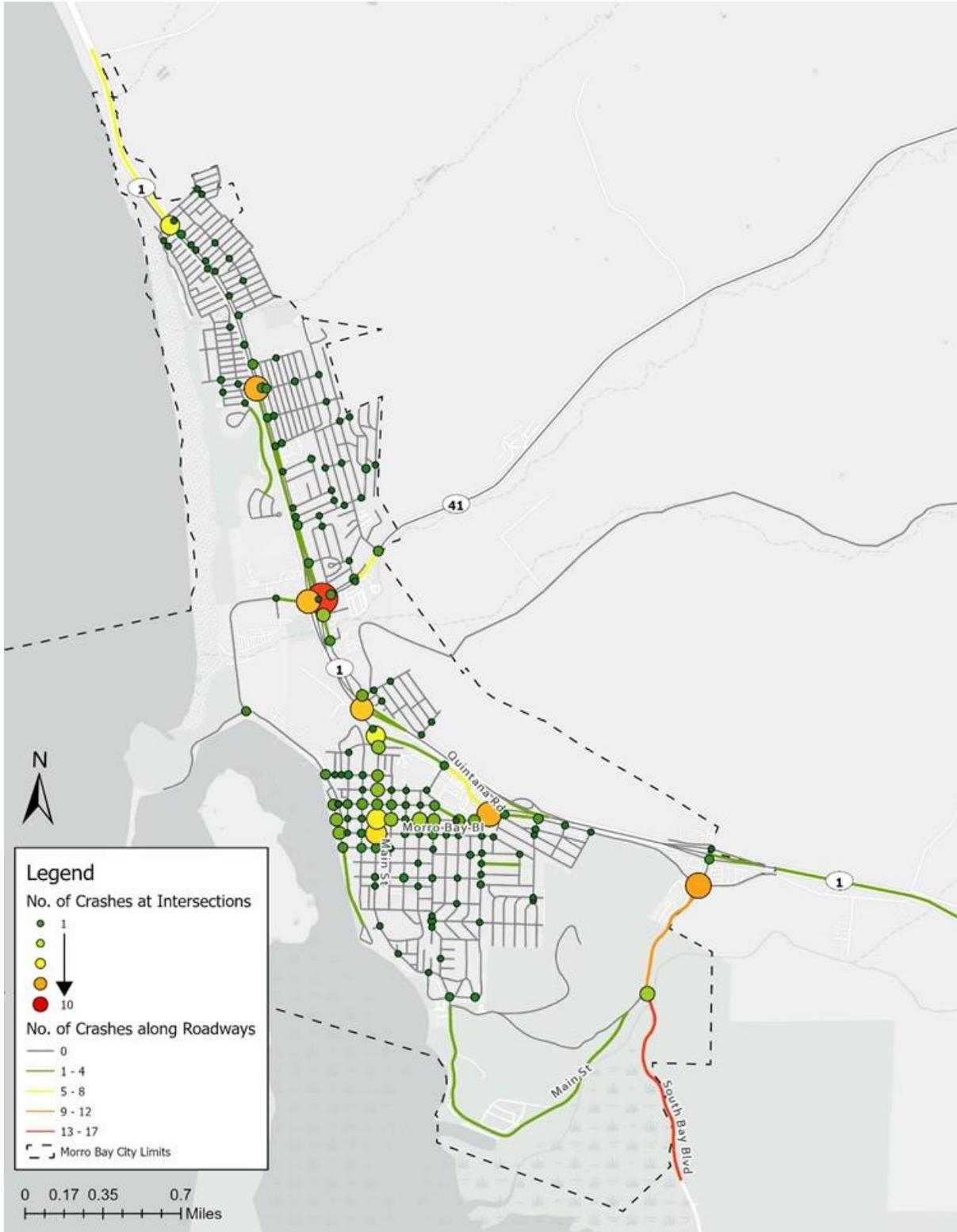
| Challenge Areas     | Statewide                     | Morro Bay                     | % Point Difference |
|---------------------|-------------------------------|-------------------------------|--------------------|
|                     | % of F+SI Crashes (2013-2022) | % of F+SI Crashes (2013-2022) |                    |
| Pedestrians         | 19.2%                         | 36.4%                         | 17.2%              |
| Aging Drivers       | 12.4%                         | 27.0%                         | 14.9%              |
| Bicyclists          | 8.3%                          | 18.2%                         | 9.8%               |
| Intersections       | 23.6%                         | 31.3%                         | 7.6%               |
| Work Zones          | 1.4%                          | 6.3%                          | 4.8%               |
| Lane Departure      | 43.3%                         | 43.8%                         | 0.5%               |
| Impaired Driving    | 25.3%                         | 25.0%                         | -0.3%              |
| Distracted Driving  | 5.0%                          | 0.0%                          | -5.0%              |
| Commercial Vehicles | 6.4%                          | 0.0%                          | -6.4%              |
| Occupant Protection | 14.2%                         | 6.3%                          | -8.0%              |
| Young Drivers       | 13.1%                         | 0.0%                          | -13.1%             |
| Aggressive Driving  | 33.1%                         | 18.8%                         | -14.3%             |
| Motorcyclists       | 21.0%                         | 6.3%                          | -14.7%             |

## 7.10 Crash Network Screening Analysis Results

**Figure 10** shows the results of the crash network screening analysis, with the number of crashes at both intersections and mid-block roadway segments.



Figure 10 – Crash Network Screening Analysis Results (2013-2022)





**Table 6 and 7** show the number of crashes occurring at locations in Morro Bay by crash type for the locations that will be studied further in the Report and highlight locations in which the probability of those crash types exceeding the threshold proportion is greater than 33%.

The tables are ordered by the number of crashes that occurred at that segment or intersection. To be statistically significant, only locations where more than two crashes occurred are represented. At locations with two or less crashes, random chance can account for crash history as much or more than specific roadway characteristics.

The tables are separated into sub-sections visible by the blue gradient. The first two columns, 'Crashes' and 'CCR Differential', represent the level of crash activity in absolute terms, and as relative to other similar locations, respectively.

Per guidance from the Local Roadway Safety Manual (LRSM) each sub-population of locations was ranked according to the number of crashes. The second column shows the CCR, which highlights whether the crash activity was higher or lower than the average for the sub-population based on the individual segment or intersection volume. This volume was either collected through data count resources or calculated based on the roadway classification. All averages used in the CCR calculation were established based on City of Morro Bay crash data to determine what locations might be best to prioritize at the local level. This process highlight's locations of crashes that are unusual for the City to determine Morro Bay's challenge areas, and not problems faced by peer cities that do not apply in Morro Bay. The remaining columns total crashes by type, to evaluate each sub-population and understand what proportion of crashes in the City are of a particular type. The citywide proportion was compared with the local intersection or segment specific proportion to determine which locations have more of a given crash type than would be expected when considering the City average. A confidence level of 95% was used for the CCR Calculations. For this study, two categories of ranges were highlighted:

- **Light Gray:** >50% probability that this crash type is over-represented on this segment/intersection as compared to other characteristically similar locations within the City of Morro Bay. Although these locations have a slightly higher probability of this crash type than their counterparts, they are not necessarily highly significant.
- **Dark Gray:** >75% probability that this crash type is over-represented on this segment/intersection as compared to other characteristically similar locations within the City of Morro Bay. These locations are highly significant in regard to the number of crashes occurring here and should be further investigated.

After this analysis was completed, the locations were ranked against other similar locations within the City by their categories according to the expected proportion of that crash type within Morro Bay. Locations with higher-than-expected crashes of that type were identified by the probability that random chance would not account for exceedances.

Additionally, it should be noted that the columns for Crash Severity, Type, Involved With, and Behavior are additional characteristics of the crashes and should not be counted as a separate crash.



Table 6– Analysis Results: Intersections

| Intersection                          | Crashes | Local CCR Differential <sup>1</sup> | EPDO <sup>2</sup> | Fatal | Serious Injury | Other Visible Injury | Complaint of Pain | PDO | Broadside | Sideswipe | Rear End | Head On | Hit Object | Overturned | Other | Pedestrian | Bicycle | Aggressive | Distracted | Impaired | Dark | Wet |
|---------------------------------------|---------|-------------------------------------|-------------------|-------|----------------|----------------------|-------------------|-----|-----------|-----------|----------|---------|------------|------------|-------|------------|---------|------------|------------|----------|------|-----|
| <b>Signalized Intersections</b>       |         |                                     |                   |       |                |                      |                   |     |           |           |          |         |            |            |       |            |         |            |            |          |      |     |
| Highway 1/San Jacinto St              | 21      | 2.12                                | 66                | 0     | 0              | 2                    | 5                 | 14  | 1         | 1         | 12       | 2       | 3          | 0          | 1     | 0          | 0       | 10         | 0          | 4        | 0    | 2   |
| Highway 1/Yerba Buena                 | 15      | 2.06                                | 65                | 0     | 0              | 1                    | 8                 | 6   | 3         | 1         | 10       | 0       | 0          | 0          | 0     | 0          | 0       | 11         | 0          | 3        | 0    | 2   |
| Main St/Quintana Rd                   | 15      | -1.51                               | 45                | 0     | 0              | 2                    | 2                 | 11  | 2         | 1         | 6        | 1       | 2          | 0          | 1     | 1          | 1       | 8          | 1          | 1        | 0    | 0   |
| <b>Roundabouts</b>                    |         |                                     |                   |       |                |                      |                   |     |           |           |          |         |            |            |       |            |         |            |            |          |      |     |
| Morro Bay Blvd/Quintana Rd            | 21      | -0.52                               | 56                | 0     | 0              | 2                    | 3                 | 16  | 13        | 1         | 3        | 2       | 2          | 0          | 0     | 0          | 0       | 3          | 0          | 3        | 1    | 1   |
| <b>Unsignalized Intersections</b>     |         |                                     |                   |       |                |                      |                   |     |           |           |          |         |            |            |       |            |         |            |            |          |      |     |
| Atascadero Rd/Main St                 | 28      | 1.47                                | 68                | 0     | 0              | 2                    | 4                 | 22  | 7         | 5         | 10       | 3       | 2          | 0          | 0     | 1          | 1       | 11         | 0          | 4        | 1    | 0   |
| S Bay Blvd/Quintana Rd                | 22      | 0.69                                | 71                | 0     | 0              | 3                    | 4                 | 15  | 10        | 0         | 7        | 0       | 1          | 1          | 2     | 0          | 0       | 10         | 0          | 3        | 2    | 2   |
| Cabrillo Hwy SB On Ramp/Atascadero Rd | 20      | 1.05                                | 208               | 0     | 1              | 2                    | 1                 | 16  | 9         | 0         | 7        | 0       | 3          | 0          | 0     | 1          | 1       | 5          | 0          | 4        | 2    | 1   |
| Cabrillo Hwy SB On Ramp/Main St       | 19      | 0.26                                | 74                | 0     | 0              | 3                    | 5                 | 11  | 7         | 3         | 3        | 1       | 3          | 0          | 2     | 0          | 2       | 4          | 0          | 2        | 1    | 1   |
| Main St/Pacific St                    | 17      | 0.58                                | 61                | 0     | 0              | 3                    | 3                 | 11  | 13        | 3         | 0        | 0       | 0          | 0          | 0     | 1          | 0       | 0          | 0          | 1        | 0    | 2   |
| Main St/Morro Bay Blvd                | 16      | 0.14                                | 36                | 0     | 0              | 1                    | 2                 | 13  | 3         | 5         | 2        | 0       | 0          | 1          | 1     | 4          | 0       | 2          | 0          | 1        | 0    | 0   |
| S Bay Blvd/State Park Rd              | 10      | -0.09                               | 213               | 0     | 1              | 3                    | 2                 | 4   | 1         | 1         | 2        | 1       | 3          | 1          | 1     | 0          | 0       | 2          | 0          | 2        | 2    | 1   |
| Morro Bay Blvd/Shasta Ave             | 10      | 0.10                                | 30                | 0     | 0              | 1                    | 2                 | 7   | 3         | 2         | 2        | 0       | 0          | 0          | 1     | 1          | 1       | 1          | 0          | 0        | 0    | 1   |
| Main St/Errol St                      | 9       | 0.11                                | 187               | 0     | 1              | 1                    | 1                 | 6   | 1         | 3         | 3        | 1       | 0          | 1          | 0     | 0          | 1       | 2          | 0          | 0        | 0    | 0   |

# MORRO BAY

## Local Roadway Safety Plan



| Intersection                | Crashes | Local CCR Differential <sup>1</sup> | EPDO <sup>2</sup> | Fatal | Serious Injury | Other Visible Injury | Complaint of Pain | PDO | Broadside | Sideswipe | Rear End | Head On | Hit Object | Overturned | Other | Pedestrian | Bicycle | Aggressive | Distracted | Impaired | Dark | Wet |
|-----------------------------|---------|-------------------------------------|-------------------|-------|----------------|----------------------|-------------------|-----|-----------|-----------|----------|---------|------------|------------|-------|------------|---------|------------|------------|----------|------|-----|
| Main St/Dunes St            | 9       | 0.09                                | 24                | 0     | 0              | 1                    | 1                 | 7   | 3         | 2         | 1        | 1       | 1          | 0          | 1     | 0          | 0       | 0          | 0          | 0        | 1    | 0   |
| Morro Bay Blvd/Monterey Ave | 9       | 0.09                                | 9                 | 0     | 0              | 0                    | 0                 | 9   | 1         | 4         | 1        | 0       | 1          | 0          | 2     | 0          | 0       | 0          | 0          | 0        | 0    | 0   |
| Main St/Surf St             | 9       | 0.09                                | 19                | 0     | 0              | 0                    | 2                 | 7   | 1         | 1         | 4        | 1       | 1          | 0          | 1     | 0          | 0       | 5          | 0          | 1        | 0    | 0   |
| Embarcadero/Pacific St      | 8       | 1.27                                | 27                | 0     | 0              | 2                    | 0                 | 6   | 3         | 2         | 2        | 0       | 0          | 0          | 0     | 2          | 0       | 0          | 0          | 3        | 0    | 0   |
| Embarcadero/Centennial Pkwy | 8       | 1.05                                | 8                 | 0     | 0              | 0                    | 0                 | 8   | 0         | 6         | 1        | 0       | 1          | 0          | 0     | 0          | 0       | 1          | 0          | 0        | 0    | 0   |
| Morro Bay Blvd/Piney Way    | 8       | 0.00                                | 13                | 0     | 0              | 0                    | 1                 | 7   | 5         | 1         | 2        | 0       | 0          | 0          | 0     | 0          | 0       | 2          | 0          | 1        | 0    | 0   |
| Main St/Radcliff Ave        | 7       | -0.16                               | 17                | 0     | 0              | 1                    | 0                 | 6   | 3         | 0         | 2        | 0       | 2          | 0          | 0     | 0          | 1       | 2          | 0          | 1        | 0    | 1   |
| Morro Bay Blvd/Kern Ave     | 7       | -0.02                               | 7                 | 0     | 0              | 0                    | 0                 | 7   | 3         | 0         | 1        | 0       | 0          | 0          | 3     | 0          | 0       | 0          | 0          | 0        | 0    | 0   |
| Morro Bay Blvd/Harbor St    | 7       | 0.01                                | 349               | 1     | 1              | 1                    | 1                 | 3   | 2         | 0         | 1        | 0       | 2          | 0          | 0     | 2          | 1       | 1          | 0          | 1        | 0    | 0   |
| Main St/Beach St            | 7       | -0.14                               | 27                | 0     | 0              | 1                    | 2                 | 4   | 1         | 3         | 2        | 0       | 0          | 0          | 0     | 1          | 0       | 1          | 0          | 1        | 0    | 0   |
| Harbor St/Morro Ave         | 6       | 0.69                                | 21                | 0     | 0              | 1                    | 1                 | 4   | 3         | 2         | 0        | 0       | 0          | 0          | 0     | 1          | 0       | 0          | 0          | 0        | 0    | 0   |
| Embarcadero Rd/Harbor St    | 6       | 0.87                                | 6                 | 0     | 0              | 0                    | 0                 | 6   | 2         | 1         | 2        | 1       | 0          | 0          | 0     | 0          | 0       | 0          | 0          | 2        | 0    | 0   |
| Main St/Harbor St           | 6       | -0.14                               | 11                | 0     | 0              | 0                    | 1                 | 5   | 3         | 2         | 1        | 0       | 0          | 0          | 0     | 0          | 0       | 1          | 0          | 1        | 0    | 0   |
| Harbor St/Piney Way         | 5       | 0.16                                | 10                | 0     | 0              | 0                    | 1                 | 4   | 3         | 0         | 2        | 0       | 0          | 0          | 0     | 0          | 1       | 2          | 0          | 1        | 0    | 0   |
| Monterey Ave/Harbor St      | 5       | 0.44                                | 5                 | 0     | 0              | 0                    | 0                 | 5   | 3         | 1         | 1        | 0       | 0          | 0          | 0     | 0          | 0       | 1          | 0          | 0        | 0    | 0   |
| Quintana Rd/Kings Ave       | 5       | 0.48                                | 15                | 0     | 0              | 1                    | 0                 | 4   | 1         | 1         | 2        | 1       | 0          | 0          | 0     | 0          | 0       | 1          | 0          | 0        | 0    | 0   |
| Main St/San Jacinto St      | 5       | 0.16                                | 10                | 0     | 0              | 0                    | 1                 | 4   | 1         | 1         | 2        | 0       | 1          | 0          | 0     | 0          | 0       | 2          | 0          | 0        | 0    | 0   |
| Atascadero Rd/Ironwood Ave  | 5       | -0.17                               | 169               | 0     | 1              | 0                    | 0                 | 4   | 4         | 0         | 0        | 0       | 0          | 0          | 1     | 0          | 0       | 0          | 0          | 1        | 0    | 0   |
| Atascadero Rd/Sunset Ave    | 5       | -0.09                               | 5                 | 0     | 0              | 0                    | 0                 | 5   | 3         | 0         | 1        | 0       | 0          | 0          | 0     | 0          | 0       | 0          | 0          | 0        | 0    | 0   |
| Embarcadero Rd/Marina St    | 5       | 0.37                                | 5                 | 0     | 0              | 0                    | 0                 | 5   | 0         | 3         | 1        | 0       | 1          | 0          | 0     | 0          | 0       | 0          | 0          | 0        | 0    | 0   |

# MORRO BAY

## Local Roadway Safety Plan



| Intersection                       | Crashes | Local CCR Differential <sup>1</sup> | EPDO <sup>2</sup> | Fatal | Serious Injury | Other Visible Injury | Complaint of Pain | PDO | Broadside | Sideswipe | Rear End | Head On | Hit Object | Overturned | Other | Pedestrian | Bicycle | Aggressive | Distracted | Impaired | Dark | Wet |
|------------------------------------|---------|-------------------------------------|-------------------|-------|----------------|----------------------|-------------------|-----|-----------|-----------|----------|---------|------------|------------|-------|------------|---------|------------|------------|----------|------|-----|
| Embarcadero/Front St/Beach St      | 5       | -0.11                               | 178               | 1     | 0              | 1                    | 0                 | 3   | 0         | 1         | 0        | 0       | 3          | 0          | 1     | 0          | 1       | 1          | 0          | 1        | 0    | 0   |
| Main St/Preston Ln                 | 5       | -0.17                               | 10                | 0     | 0              | 0                    | 1                 | 4   | 0         | 0         | 4        | 0       | 1          | 0          | 0     | 0          | 0       | 4          | 0          | 0        | 0    | 0   |
| Main St/Sequoia St                 | 5       | 0.59                                | 29                | 0     | 0              | 2                    | 1                 | 2   | 2         | 0         | 1        | 0       | 1          | 1          | 0     | 0          | 0       | 1          | 0          | 3        | 0    | 0   |
| Cabrillo Hwy/SB On Ramp/S Bay Blvd | 4       | -0.28                               | 19                | 0     | 0              | 1                    | 1                 | 2   | 4         | 0         | 0        | 0       | 0          | 0          | 0     | 0          | 0       | 2          | 0          | 1        | 0    | 0   |
| Main St/Avalon St                  | 4       | -0.09                               | 4                 | 0     | 0              | 0                    | 0                 | 4   | 1         | 0         | 3        | 0       | 0          | 0          | 0     | 0          | 0       | 1          | 0          | 1        | 0    | 0   |
| Atascadero Rd/Mimosa St            | 4       | 0.77                                | 9                 | 0     | 0              | 0                    | 1                 | 3   | 2         | 0         | 1        | 0       | 0          | 0          | 1     | 0          | 0       | 1          | 1          | 1        | 0    | 0   |
| Main St/Hill St                    | 4       | -0.08                               | 14                | 0     | 0              | 0                    | 2                 | 2   | 1         | 0         | 2        | 0       | 1          | 0          | 0     | 0          | 0       | 1          | 0          | 1        | 0    | 0   |
| Main St/Hill St                    | 4       | -0.19                               | 19                | 0     | 0              | 1                    | 1                 | 2   | 3         | 0         | 0        | 0       | 0          | 0          | 0     | 1          | 0       | 0          | 0          | 0        | 0    | 0   |
| Harbor St/Market Ave               | 4       | -0.01                               | 14                | 0     | 0              | 1                    | 0                 | 3   | 2         | 1         | 0        | 0       | 0          | 0          | 0     | 1          | 0       | 0          | 0          | 1        | 0    | 0   |
| Embarcadero Rd/Coleman Dr          | 4       | -0.04                               | 4                 | 0     | 0              | 0                    | 0                 | 4   | 1         | 0         | 0        | 1       | 0          | 0          | 1     | 0          | 0       | 0          | 0          | 1        | 0    | 1   |
| San Jacinto/Alder Ave              | 4       | 0.19                                | 4                 | 0     | 0              | 0                    | 0                 | 4   | 2         | 2         | 0        | 0       | 0          | 0          | 0     | 0          | 0       | 0          | 0          | 1        | 0    | 0   |
| Pacific St/Piney Way               | 4       | 0.01                                | 4                 | 0     | 0              | 0                    | 0                 | 4   | 1         | 0         | 1        | 1       | 0          | 0          | 0     | 1          | 0       | 2          | 0          | 0        | 0    | 0   |
| Morro Ave/Marina St                | 4       | 0.39                                | 14                | 0     | 0              | 0                    | 2                 | 2   | 2         | 1         | 0        | 0       | 1          | 0          | 0     | 0          | 0       | 0          | 0          | 0        | 0    | 0   |
| Ridgeway St/Piney Way              | 3       | -0.04                               | 13                | 0     | 0              | 1                    | 0                 | 2   | 0         | 1         | 0        | 0       | 2          | 0          | 0     | 0          | 0       | 0          | 0          | 1        | 0    | 0   |
| Main St/San Joaquin St             | 3       | -0.15                               | 22                | 0     | 0              | 2                    | 0                 | 1   | 1         | 0         | 2        | 0       | 0          | 0          | 0     | 0          | 0       | 1          | 0          | 2        | 0    | 0   |
| Main St/Vashon St                  | 3       | 0.01                                | 3                 | 0     | 0              | 0                    | 0                 | 3   | 0         | 0         | 0        | 0       | 3          | 0          | 0     | 0          | 0       | 0          | 0          | 2        | 0    | 0   |
| Laurel Ave/Koa Ave                 | 3       | 0.61                                | 3                 | 0     | 0              | 0                    | 0                 | 3   | 0         | 2         | 1        | 0       | 0          | 0          | 0     | 0          | 0       | 0          | 0          | 0        | 2    | 0   |
| Quintana Rd/Butte Ave              | 3       | 0.01                                | 13                | 0     | 0              | 0                    | 2                 | 1   | 0         | 1         | 2        | 0       | 0          | 0          | 0     | 0          | 0       | 2          | 0          | 1        | 0    | 0   |
| Quintana Rd/Kennedy Way            | 3       | -0.28                               | 3                 | 0     | 0              | 0                    | 0                 | 3   | 1         | 2         | 0        | 0       | 0          | 0          | 0     | 1          | 0       | 1          | 0          | 0        | 0    | 0   |

# MORRO BAY

## Local Roadway Safety Plan



| Intersection                               | Crashes | Local CCR Differential <sup>1</sup> | EPDO <sup>2</sup> | Fatal | Serious Injury | Other Visible Injury | Complaint of Pain | PDO | Broadside | Sideswipe | Rear End | Head On | Hit Object | Overturned | Other | Pedestrian | Bicycle | Aggressive | Distracted | Impaired | Dark | Wet |
|--|---------|-------------------------------------|-------------------|-------|----------------|----------------------|-------------------|-----|-----------|-----------|----------|---------|------------|------------|-------|------------|---------|------------|------------|----------|------|-----|
| Kern Ave/Bradley Ave                       | 3       | 0.01                                | 13                | 0     | 0              | 1                    | 0                 | 2   | 0         | 0         | 0        | 1       | 2          | 0          | 0     | 0          | 0       | 2          | 0          | 1        | 0    | 0   |
| Pacific St/Morro Ave                       | 3       | 0.10                                | 8                 | 0     | 0              | 0                    | 1                 | 2   | 1         | 1         | 0        | 0       | 1          | 0          | 0     | 0          | 1       | 1          | 0          | 0        | 0    | 0   |
| Beach St/Market Ave                        | 3       | -0.31                               | 3                 | 0     | 0              | 0                    | 0                 | 3   | 0         | 0         | 2        | 0       | 0          | 0          | 1     | 0          | 0       | 1          | 0          | 0        | 0    | 0   |
| Anchor St/Napa Ave                         | 3       | 0.31                                | 167               | 0     | 1              | 0                    | 0                 | 2   | 2         | 0         | 0        | 0       | 0          | 0          | 0     | 1          | 1       | 2          | 0          | 0        | 0    | 0   |
| Main St/Kern Ave/Bayshore Dr               | 3       | -0.26                               | 18                | 0     | 0              | 1                    | 1                 | 1   | 0         | 0         | 0        | 1       | 2          | 0          | 0     | 0          | 0       | 0          | 0          | 2        | 1    | 0   |
| 1. Local Critical Crash Rate Differential  |         |                                     |                   |       |                |                      |                   |     |           |           |          |         |            |            |       |            |         |            |            |          |      |     |
| 2. Equivalent Property Damage Only Crashes |         |                                     |                   |       |                |                      |                   |     |           |           |          |         |            |            |       |            |         |            |            |          |      |     |



Table 7 – Analysis Results: Segments

| Facility                                   | Limits                             | Crashes | Local CCR Differential <sup>1</sup> | EPDO <sup>2</sup> | Fatal | Serious Injury | Other Visible Injury | Complaint of Pain | PDO | Broadside | Sideswipe | Rear End | Head On | Hit Object | Overturned | Other | Pedestrian | Bicycle | Aggressive | Distracted | Impaired | Dark | Wet |
|--|------------------------------------|---------|-------------------------------------|-------------------|-------|----------------|----------------------|-------------------|-----|-----------|-----------|----------|---------|------------|------------|-------|------------|---------|------------|------------|----------|------|-----|
| <b>Expressway</b>                          |                                    |         |                                     |                   |       |                |                      |                   |     |           |           |          |         |            |            |       |            |         |            |            |          |      |     |
| Highway 1                                  | Yerba Buena St - City Limits       | 5       | 0.07                                | 25                | 0     | 0              | 1                    | 2                 | 2   | 0         | 1         | 3        | 0       | 1          | 0          | 0     | 0          | 0       | 3          | 0          | 1        | 2    | 1   |
| <b>Minor Arterial</b>                      |                                    |         |                                     |                   |       |                |                      |                   |     |           |           |          |         |            |            |       |            |         |            |            |          |      |     |
| South Bay Blvd                             | Park View Rd - City Limits         | 17      | 0.34                                | 47                | 0     | 0              | 2                    | 2                 | 13  | 1         | 1         | 0        | 2       | 9          | 3          | 1     | 0          | 0       | 7          | 0          | 6        | 7    | 1   |
| South Bay Blvd                             | Park View Rd - Quintana Rd         | 10      | 0.35                                | 183               | 0     | 1              | 1                    | 0                 | 8   | 0         | 1         | 1        | 1       | 2          | 1          | 4     | 0          | 0       | 3          | 1          | 3        | 4    | 1   |
| Morro Bay Blvd                             | Quintana Rd - Highway 1            | 6       | 2.05                                | 25                | 0     | 0              | 2                    | 0                 | 4   | 2         | 0         | 1        | 0       | 2          | 0          | 1     | 0          | 1       | 3          | 1          | 2        | 0    | 0   |
| Highway 41/Atascadero Rd                   | Hill St - Ironwood Ave             | 6       | 1.50                                | 16                | 0     | 0              | 0                    | 2                 | 4   | 5         | 0         | 0        | 0       | 1          | 0          | 0     | 0          | 0       | 0          | 0          | 1        | 0    | 0   |
| Main St                                    | Hill St - Highway 41/Atascadero Rd | 3       | 2.55                                | 172               | 0     | 1              | 0                    | 1                 | 1   | 0         | 1         | 1        | 0       | 0          | 0          | 0     | 1          | 0       | 1          | 0          | 0        | 1    | 0   |
| <b>Collector</b>                           |                                    |         |                                     |                   |       |                |                      |                   |     |           |           |          |         |            |            |       |            |         |            |            |          |      |     |
| Quintana Rd                                | Kennedy Way - Morro Bay Bl         | 7       | 1.43                                | 22                | 0     | 0              | 0                    | 3                 | 4   | 3         | 1         | 1        | 0       | 2          | 0          | 0     | 0          | 1       | 1          | 0          | 2        | 0    | 2   |
| Harbor St                                  | Piney Way - Morro Bay Bl           | 3       | 1.92                                | 18                | 0     | 0              | 1                    | 1                 | 1   | 0         | 0         | 0        | 0       | 0          | 0          | 0     | 3          | 0       | 0          | 0          | 0        | 0    | 0   |
| 1. Local Critical Crash Rate Differential  |                                    |         |                                     |                   |       |                |                      |                   |     |           |           |          |         |            |            |       |            |         |            |            |          |      |     |
| 2. Equivalent Property Damage Only Crashes |                                    |         |                                     |                   |       |                |                      |                   |     |           |           |          |         |            |            |       |            |         |            |            |          |      |     |



## 8. Best Practices Evaluation and Emphasis Areas

### 8.1 Best Practices Evaluation

**Table 8** identifies existing plans and policies that were recently completed, or are planned, or on-going within the City of Morro Bay. The intent of this review is to provide an idea of the types of strategies in place or encouraged by the City that may impact the safety analysis process. It will also identify opportunity areas where the City could adopt non-infrastructure countermeasures. This table also ties each topic and enhancement to the emphasis areas that are laid out in **Section 8.2**.

**Table 8 – Summary of Program, Policies, and Practices**

| Topic   | Initiatives/ Current Status  | Opportunities for Implementation or Enhancement   |
|---|--|---|
| <b>COMMITTEES / ROLES</b>   |  |   |
| <b>Does the City have an Active Transportation Coordinator?</b>                 | The City does not have an Active Transportation Coordinator.   | Adopt an Active Transportation Coordinator role with existing staff or add role; Plan to maintain the role through personnel changes. |
| <b>Does the City have a Safety or Active Transportation Advisory Committee?</b> | No, but the City has a Public Works Advisory Board (PWAB). This would fall under their purview. The City also has a Citizens Finance Committee.  | Continue to have board committee discuss roadway and transportation safety issues and efforts.  |
| <b>Does the City have an Active Transportation Safety Education Program?</b>    | No, although it was a proposed project to educate cyclists on rules of the road & bike safety as well as educate drivers about cyclist rights in the 2011 Morro Bay Bicycle & Pedestrian Plan. | Implement education efforts.  |
| <b>POLICY / PLANS</b>   |  |   |
| <b>Does the City have a Complete Streets Plan?</b>                              | No, but there were complete streets projects included in the Morro Bay Bicycle & Pedestrian Master Plan (2011). Complete streets have not been prioritized by City in planning efforts.        | Continue to plan for complete streets improvements as part of regular planning process.   |
| <b>Does the City assess Traffic Impact Fees?</b>                                | Yes, when there are large developments/projects that create a nexus for fees. The  | Continue to assess Traffic Impact Fees and apply funding  |



| Topic   | Initiatives/ Current Status   | Opportunities for Implementation or Enhancement   |
|---|---|---|
|   | City is currently in the process of updating impact fees as a whole.  | to transportation improvements.   |
| <b>Does the City have a Safe Routes to School program?</b>  | No  | Implement a Safe Routes to School program with funding, utilize crash analyses to refocus efforts   |
| <b>Does the City implement Traffic Calming Policies?</b>  | No. Policy not included in Plan Morro Bay but was included in 2016-2017 City Goals and Objectives; planned to complete 2-3 traffic calming projects. No traffic calming policies implemented yet. | Look to implement traffic calming policies where necessary. Some locations mentioned in this plan.  |
| <b>Does the City regularly conduct Speed Surveys?</b>   | Yes.  | Continue to update as required by California Vehicle Code; Identify opportunities for speed limit reduction per new law, AB 43.   |
| <b>Does the City utilize Warrants for Stop Signs and Signals?</b>   | Yes.  | Continue to utilize warrants for stop signs and signals   |
| <b>Does the City have Transportation Demand Management (TDM) or Vehicle Miles Travelled (VMT) Reduction policies?</b> | Yes, these are included in the City's General Plan.   | Continue to expand efforts to align TDM and VMT reduction policies with state guidelines  |
| <b>Does the City perform Traffic Crash Monitoring?</b>  | No.   | Utilize Crossroads database for spot monitoring; complete citywide monitor on regular basis   |
| <b>Does the City have an Active Transportation Master Plan?</b>   | No, however San Luis Obispo County does have an ATP.  | Continue to implement improvements where feasible; develop City Active Transportation Master Plan. City has budgeted funds for development of a future Active Transportation Plan.                          |
| <b>Does the City have CAMUTCD-compliant Pedestrian Signal Timing?</b>   | The City has aimed to comply with criteria and uniform specifications defined in the MUTCD. Compliance to the maximum was aimed by the 2011 Morro Bay Bicycle and Pedestrian Master Plan.         | Continue to update pedestrian signal timing as new standards are developed. Explore the implementation of updated pedestrian and bicycle signal timing and bicycle detection at key locations, specifically |



| Topic   | Initiatives/ Current Status   | Opportunities for Implementation or Enhancement   |
|---|---|---|
|   |   | Quintana / Main signalized intersection.  |
| <b>Does the City implement Crosswalks at high pedestrian locations?</b>         | As of late, no new crosswalks have been established in recent years. From this plan, City Engineer may find warrants to designate crosswalks at intersections when deemed appropriate.  | Continue to implement these improvements where feasible; keep updated with best practices regarding pedestrian improvements |
| <b>What type of traffic enforcement does the City conduct?</b>                  | Standard. Police enforcement is utilized to enforce traffic regulations.  | Continue to enforce traffic laws at key locations; Apply for OTS funding to expand enforcement activities                   |
| <b>What types of transit does the City have?</b>                                | Morro Bay has three types of transit which are bus, call-a-ride, and trolley. Morro Bay Fixed Route is a bus system within the city limits that is year-round. Morro Bay Call-A-Ride is a curb-to-curb service for those ¾ of a mile within a fixed route. Morro Bay Trolley is a seasonal fixed route trolley in the downtown and waterfront area. | Identify areas of high transit usage and focus crash analysis efforts at these locations                                    |
| <b>What types of wayfinding does the City have?</b>                             | Signage to help navigate residents and visitors to key landmarks, facilities, and parking areas.  | Identify areas where wayfinding can be expanded, including pedestrian and destination wayfinding.                           |
| <b>DATA COLLECTION / INVENTORY</b>  |   |   |
| <b>Does the City have an Inventory of Pedestrian Signs and Signals?</b>         | The City has no inventory of pedestrian signs and signals.  | Adopt a process to take inventory of these signals as they are updated/installed; Incorporate inventory into GIS database   |
| <b>Does the City have an Inventory/Mapping of Active Transportation Routes?</b> | The City and SLOCOG have a GIS database of active transportation routes.  | Continue to update inventory as active transportation routes are expanded; Incorporate into GIS database                    |
| <b>Does the City utilize Crossroads Database for crashes?</b>                   | Yes. Police Department maintains the Crossroads database using SWITRS data. The city uses the crash   | Continue to utilize Crossroads database and regularly update  |



| Topic  | Initiatives/ Current Status  | Opportunities for Implementation or Enhancement   |
|--|--|---|
|  | database for intersection studies.   |   |
| <b>Does the City have Active Transportation Volume Counting?</b>                             | No, however SLOCOG performs pedestrian and bicycle counts.   | Continue to update database of volumes; Incorporate into GIS database for SLOCOG  |
| <b>COORDINATION / FEEDBACK</b>   |  |   |
| <b>What ways can citizens give feedback about roadway safety?</b>                            | The City has an online and mobile app that allows users to report issues relating to graffiti, potholes, drainage concerns, and more. Citizens can also contact staff via phone, email, or service request online.                     | Continue to expand ways that citizens can give feedback and make improvements to service request tool if necessary. Incorporate requests into GIS maps to show hotspots for requests. |
| <b>What types of Coordination with other City organization does your department perform?</b> | City schools are managed by the San Luis Coastal Unified School District. The City engages with the school district routinely on transportation related concerns and has recently engaged with them about the SR-1/SR-41/Main project. | Continue to engage across departments and organizations; continue to involve these organizations in crash analysis and countermeasure development process                             |
| <b>What types of Law Enforcement/Emergency Service Engagement does the City perform?</b>     | The City has a mobile app allows users to report issues or concerns relating to general concerns, narcotics, and suspicious activity to increase crime prevention and increase on-line reporting.                                      | Continue to engage law enforcement and fire department in roadway safety planning   |

## 8.2 Emphasis Areas

Emphasis areas represent crash factors that are common in the City and provide the opportunity to reduce the largest number of traffic injuries with strategic investment. Emphasis areas were developed by revisiting the vision and goals of this planning process and comparing them with the trends and patterns identified in the crash analysis.

### 8.2.1 Emphasis Area #1: Speeding

**Description:** Speeding drivers were a major concern of residents and a major cause of crashes (16.7% of crashes were caused by unsafe speed).

#### Goals for Emphasis Area #1:

- Reduce the number of crashes due to speeding.



- Identify hot spots and priority corridors for speeding.
- Reduce speeding on both major streets and local residential streets.
- Apply for funding and implement improvements to address aggressive driving.

#### Strategies for Emphasis Area #1:

- Alter road design to encourage slower speeds.
- Intersection improvements aimed at reducing vehicles speeds.
- Increased law enforcement presence near speeding hotspots.
- Increased educational campaigns to reduce speeding.

#### 8.2.2 Emphasis Area #2: Cut-through Traffic

**Description:** Cut-through traffic were a major concerns of residents, particularly on local and residential streets. Cut-through traffic is often related to speed drivers as they use local streets to avoid busier main corridors.

#### Goal for Emphasis Area #2:

- Reduce cut-through traffic on local streets.
- Work with residents to implement traffic calming improvements.

#### Strategies for Emphasis Area #2:

- Implement traffic calming improvements to reduce cut-through traffic.

#### 8.2.3 Emphasis Area #3: Drivers Ignoring Signals and Stop Signs

**Description:** Drivers ignoring signals and stop signs was a major concern of residents and the public agency partners and led to 3.5% of the crashes observed in the City. These crashes were more likely to result in serious injuries.

#### Goal for Emphasis Area #3:

- Reduce the number of crashes caused by drivers ignoring signals and stop signs.
- Decrease the number of drivers ignoring signals and stop signs.

#### Strategies for Emphasis Area #3:

- Increase visibility of stop signs and signals with improvements such as reflective markings and flashing beacons.
- Increase enforcement near stop sign/signal running hot spots.

#### 8.2.4 Emphasis Area #4: Lighting

**Description:** Insufficient street lighting was a major concern of residents. 28% of the crashes occurred at night and 7% of crashes occurred in areas where there were no streetlights.

#### Goal for Emphasis Area #4:

- Identify areas where additional street lighting can be installed and is warranted and appropriate.
- Increase night-time visibility in areas with pedestrians and bicyclists.

#### Strategies for Emphasis Area #4:



- Install additional street lighting where appropriate.
- Regularly review street lighting in issue areas.
- Respond to citizen complaints about street lighting on a regular basis.

### 8.2.5 Emphasis Area #5: Pedestrian Safety

**Description:** Pedestrian safety was a major concern of residents and a major cause of severe injury and fatality crashes in Morro Bay. 3 out of 9 severe injury crashes and 1 out of 2 fatality crashes in Morro Bay involved pedestrians.

#### Goal for Emphasis Area #5:

- Reduce the number and severity of pedestrian crashes in Morro Bay.
- Increase pedestrian safety on Morro Bay streets.
- Increase the visibility of pedestrians.
- Increase cohesiveness of sidewalk network, as appropriate.

#### Strategies for Emphasis Area #5:

- Provide outreach, education, and enforcement programs to encourage safer driver behaviors near pedestrians.
- Install high-visibility crosswalk markings at the intersection of key destinations.
- Provide dedicated pedestrian and bicycle infrastructure to and from bus stops.
- Install adequate street lighting and increase lighting levels in conflict areas.
- Widen street shoulders where appropriate.
- Provide signage (e.g., pedestrian crossing ahead) to help drivers expect to slow down for pedestrians.
- Review sidewalk gaps and close as appropriate.

### 8.2.6 Emphasis Area #6: Bicyclist Safety

**Description:** Bicyclists safety was a major concern of residents and a significant cause of severe injury and fatality crashes in Morro Bay. Bicyclists were involved with 1 severe injury crash and 1 fatality crash.

#### Goal for Emphasis Area #6:

- Reduce the number and severity of bicycle crashes in Morro Bay.
- Increase bicycle safety on Morro Bay streets.
- Increase the visibility of bicyclists.
- Increase cohesiveness of bicycle network

#### Strategies for Emphasis Area #6:

- Provide outreach, education, and enforcement programs to encourage safer driving behaviors near bicyclist.
- Provide signage to help drivers expect to slow down for pedestrians and bikes.
- Install bicycle facilities along key corridors.
- Install additional bicycle markings (including green paint in conflict zones).



- Work closer with local advocacy groups and bicycle clubs to assist in prioritizing bicycle improvements.

## 9. Potential Improvements

This section provides information on general identified issues, crash reduction factors, improvements, and countermeasures identified for the City of Morro Bay, as well as for specific project locations identified as part of this analysis. Potential improvements/countermeasures are based on data analysis, stakeholder input, and site visits.

### 9.1 Improvement (Countermeasure) Selection Process

Part D of the HSM provides information on Crash Modification Factors (CMF) for roadway segments, intersections, interchanges, special facilities, and road networks. CMFs are used to estimate the safety effects of highway improvements, specifically to compare and select highway safety improvements. A CMF less than 1.0 indicates that a treatment has the potential to reduce crashes. A CMF greater than 1.0 indicates that a treatment has the potential to increase crashes. A Crash Reduction Factor (CRF) is directly connected to the CMF and is “mathematically defined as  $(1 - \text{CMF})$  (the higher the CRF, the greater the expected reduction in crashes)<sup>4</sup>.” CMFs can help decision makers weigh potential alternative projects but are only one measure of a project’s value and should be considered part of a larger decision-making process. Furthermore, it is important to note that not all CMFs are as reliable as others. The FHWA maintains a federal depository of CMFs and includes a star rating system to help users determine which CMFs are bolstered by the best and most thorough research. Key factors to consider when applying CMFs include:

1. Selection of an appropriate CMF;
2. Estimation of crashes without treatment;
3. Application of CMFs by type and severity; and,
4. Estimation of the combined effect for multiple treatments.

Examples of Safety Countermeasures can be found through several sources. This Report utilizes the countermeasures found in the California LRSM and the CMF Clearinghouse (CMF CH) website. Countermeasures/improvements are based on the data analysis and site visits. Additional countermeasures were identified for the high-level issues on a city-wide level and are discussed in **Section 9.2**.

### 9.2 Infrastructure Improvements

This evaluation considered citywide trends to identify countermeasures that would likely provide the most benefit with widespread implementation. **Table 9** outlines the citywide safety project

<sup>4</sup> Local Roadway Safety Manual (Version 1.6) 2022. Page 27.



opportunities, which is also referred to as the “Countermeasure Toolbox”. Within the toolbox, the description of the countermeasure along with its Local Roadway Safety Manual (LRSM) ID number is listed. The next column, Crash Reduction Factor (CRF), are “multiplicative factors used to estimate the expected reduction in number of crashes after implementing a given countermeasure at a specific site (the higher the CRF, the greater the expected reduction in crashes).” For improvements that do not have a related countermeasure in the LRSM, a conservative 5% crash reduction factor was estimated. For each of these countermeasures, a planning level benefit/cost analysis was completed.

Applying the benefit/cost at the citywide level was estimated assuming some randomness in crash distribution. The location characteristics, such as whether there is a traffic signal, and the type of crashes, were used at the citywide level to calculate an average cost of crashes that the countermeasure might reduce. The benefit per location was then factored out to a 20-year lifecycle savings, with an Opinion of Project Probable Cost (OPCC) for the initial installation costs and a per-year maintenance cost estimate. The cost shown in **Table 9** should be considered initial planning costs using 2024 dollars and not assumed final. These costs are based on typical construction conditions. Additional costs may be incurred based on unusual factors or other site-specific conditions. Treatments that are eligible for the HSIP set-aside categories are called out in the table.

Any locations with planned or ongoing projects were generally not included in the list of potential infrastructure improvements. This includes the intersection of Highway 1, Highway 41 and Main Street. While this intersection had the highest number of crashes, a project to improve the safety of this intersection is already planned and funded.



Table 9 – Prioritized List of Projects

| Location                                      | Improvements   | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs | Benefit-Cost<br>Ratio | Major Potential<br>Funding Source  | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|---|--|---------------------|------------------------------|---------------|-----------------------|--|-----------------------------------|----------------------------|
| Morro Bay Blvd<br>(Market Ave to Kern<br>Ave) | Curb<br>Extensions<br>(Bulb-Outs) at<br>intersections  | NS21PB              | 35%                          | \$750,000     | 4.38                  | Highway Safety<br>Improvement<br>Program (HSIP), Safe<br>Streets for All (SS4A),<br>Active Transportation<br>Program (ATP) | X                                 | Medium-term                |
| Morro Bay Blvd                                | High Visibility<br>Crosswalks (all<br>intersections,<br>painted<br>crosswalks at<br>select<br>locations) | NS21PB              | 35%                          | \$180,000     | 9.38                  | HSIP, SS4A, ATP  | X                                 | Short-term                 |
| Morro Bay Blvd                                | Install Speed<br>Feedback<br>Signage<br>(various<br>locations)   | R26                 | 30%                          | \$68,400      | 24.68                 | HSIP, SS4A   |                                   | Short-term                 |
| Morro Bay Blvd                                | Install<br>Sharrows (Class<br>III bike lanes)  | -                   | 5%                           | \$30,000      | 9.95                  | HSIP, SS4A   |                                   | Short-term                 |
| Morro Bay Blvd                                | Striping to<br>narrow travel<br>lanes and<br>delineate<br>parking<br>(throughout<br>corridor)            | -                   | 5%                           | \$30,000      | 9.95                  | HSIP   |                                   | Short-term                 |

# MORRO BAY

## Local Roadway Safety Plan



| Location                              | Improvements  | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs | Benefit-Cost<br>Ratio | Major Potential<br>Funding Source | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|---------------------------------------|---|---------------------|------------------------------|---------------|-----------------------|-----------------------------------|-----------------------------------|----------------------------|
| Morro Bay Blvd                        | Pedestrian warning/yield signage at existing uncontrolled intersections | NS20PB              | 25%                          | \$10,000      | 120.66                | HSIP                              |                                   | Short-term                 |
| Morro Bay Blvd & Kern Ave WB          | Reduce lane width   | -                   | 5%                           | \$3,000       | 1.77                  | HSIP                              |                                   | Short-term                 |
| Morro Bay Blvd onto Harbor Blvd St NB | Reduce radius or eliminate the free right turn                          | -                   | 5%                           | \$20,000      | 14.97                 | HSIP, SS4A                        |                                   | Medium-term                |
| Morro Bay Blvd & Morro Ave            | Install Rectangular Rapid Flashing Beacon (RRFB)                        | NS22PB              | 35%                          | \$30,000      | 0.31                  | HSIP, ATP                         | X                                 | Medium-term                |
| Morro Bay Blvd & Bernardo Ave         | Install Rectangular Rapid Flashing Beacon (RRFB)                        | NS22PB              | 15%                          | \$30,000      | 53.70                 | HSIP, ATP                         | X                                 | Medium-term                |
| Morro Bay Blvd & Kern Ave             | Install Rectangular Rapid Flashing Beacon (RRFB) and Refuge Island      | NS22PB              | 25%                          | \$30,000      | 1.24                  | HSIP, ATP                         | X                                 | Medium-term                |
| Morro Bay Blvd                        | Landscape Buffer of at least 2' between                                 | -                   | 5%                           | \$250,000     | 1.13                  | SS4A                              |                                   | Long-term                  |

# MORRO BAY

## Local Roadway Safety Plan



| Location                                       | Improvements  | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs | Benefit-Cost<br>Ratio | Major Potential<br>Funding Source | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|--|---|---------------------|------------------------------|---------------|-----------------------|-----------------------------------|-----------------------------------|----------------------------|
|  | sidewalks and travel lanes (throughout)                         |                     |                              |               |                       |                                   |                                   |                            |
| Morro Bay Boulevard & Quintana Road Roundabout | Additional signage and striping to reduce driver confusion      | -                   | 5%                           | \$30,000      | 1.23                  | SS4A                              |                                   | Short-term                 |
| Morro Bay Boulevard & Quintana Road Roundabout | Adjust crosswalks to increase pedestrian safety                 | -                   | 5%                           | \$7,500       | 15.14                 | SS4A                              |                                   | Medium-term                |
| Embarcadero Rd from Marina St to Beach St      | Lower Speed Limits per California Assembly Bill 43 (15-20mph)   | -                   | 5%                           | \$2,500       | 59.79                 | City-funded                       |                                   | Short-term                 |
| Embarcadero Rd from Marina St to Beach St      | Implement delivery time restrictions to reduce truck congestion | -                   | 5%                           | \$1,500       | 99.64                 | City-funded                       |                                   | Short-term                 |
| Embarcadero Rd from Marina St to Beach St      | High Visibility Crosswalk Striping                              | NS21PB              | 35%                          | \$50,000      | 33.74                 | HSIP, SS4A, ATP                   | X                                 | Short-term                 |

# MORRO BAY

## Local Roadway Safety Plan



| Location   | Improvements   | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs | Benefit-Cost<br>Ratio | Major Potential<br>Funding Source | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|--|--|---------------------|------------------------------|---------------|-----------------------|-----------------------------------|-----------------------------------|----------------------------|
| Embarcadero Rd<br>from Marina St to<br>Beach St  | Curb<br>Extensions<br>(Bulb-Outs) at<br>intersections                  | NS21PB              | 35%                          | \$200,000     | 8.44                  | HSIP, SS4A, ATP                   | X                                 | Medium-term                |
| Embarcadero Rd<br>from Marina St to<br>Beach St  | Install<br>Rectangular<br>Rapid Flashing<br>Beacon (RRFB)              | R37PB               | 35%                          | \$60,000      | 17.44                 | HSIP, SS4A, ATP                   | X                                 | Medium-term                |
| Embarcadero Rd<br>from Marina St to<br>Beach St  | Raised<br>Crosswalks   | R36PB               | 35%                          | \$70,000      | 14.95                 | HSIP, SS4A, ATP                   |                                   | Long-term                  |
| Quintana Rd from<br>Main St to Morro Bay<br>Blvd | Median Island<br>with Left Turn<br>Pockets<br>(throughout<br>corridor) | R08                 | 25%                          | \$53,400      | 8.06                  | HSIP, SS4A                        |                                   | Long-term                  |
| Quintana Rd from<br>Main St to Morro Bay<br>Blvd | Speed<br>Feedback<br>Signage<br>(Various<br>Locations)                 | R26                 | 30%                          | \$22,800      | 8.55                  | HSIP, SS4A                        |                                   | Short-term                 |
| Quintana Rd from<br>Main St to Morro Bay<br>Blvd | Raised<br>Pavement<br>Markings along<br>edgelines                      | -                   | 5%                           | \$1,500       | 57.39                 | HSIP, SS4A                        |                                   | Short-term                 |
| Quintana Rd from<br>Main St to Morro Bay<br>Blvd | Reduce lane<br>widths  | -                   | 5%                           | \$2,500       | 34.44                 | City-funded                       |                                   | Short-term                 |

# MORRO BAY

## Local Roadway Safety Plan



| Location                                   | Improvements  | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs | Benefit-Cost<br>Ratio | Major Potential<br>Funding Source | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|--|---|---------------------|------------------------------|---------------|-----------------------|-----------------------------------|-----------------------------------|----------------------------|
| Quintana Rd from Main St to Morro Bay Blvd | Install RRFB between Kennedy Road and Morro Bay Boulevard         | R37PB               | 35%                          | \$30,000      | 20.09                 | HSIP, ATP                         | X                                 | Medium-term                |
| Quintana Rd from Main St to Morro Bay Blvd | Curve Warning Signage   | R24                 | 25%                          | \$2,400       | 179.35                | HSIP, SS4A                        |                                   | Short-term                 |
| Quintana Rd from Main St to Morro Bay Blvd | Painted Bike Lanes  | R32PB               | 35%                          | \$20,000      | 30.13                 | HSIP, SS4A                        |                                   | Short-term                 |
| Quintana Rd from Main St to Morro Bay Blvd | Add speed signs closer to roundabout                              | -                   | 5%                           | \$2,000       | 43.05                 | SS4A                              |                                   | Short-term                 |
| Main St and Quintana Rd                    | Retroreflective Backplates on signal heads                        | S02                 | 15%                          | \$12,000      | 66.24                 | HSIP                              |                                   | Short-term                 |
| Main St and Quintana Rd                    | Review yellow/red timing (all signals)                            | S03                 | 15%                          | \$2,500       | 75.91                 | HSIP                              |                                   | Short-term                 |
| Main St and Quintana Rd                    | High Visibility Crosswalks with Leading Pedestrian Interval (LPI) | S21PB               | 60%                          | \$10,000      | 37.96                 | HSIP, SS4A, ATP                   |                                   | Short-term                 |

# MORRO BAY

## Local Roadway Safety Plan



| Location                    | Improvements   | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs | Benefit-Cost<br>Ratio | Major Potential<br>Funding Source | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|-----------------------------|--|---------------------|------------------------------|---------------|-----------------------|-----------------------------------|-----------------------------------|----------------------------|
| Main St and Quintana Rd     | Green Bicycle Paint near Conflict Points (various locations)                                   | -                   | 5%                           | \$6,300       | 42.06                 | HSIP, SS4A                        |                                   | Medium-term                |
| Main St and Quintana Rd     | Connections to Bike Path (requires diagonal crossing, exclusive phase, and additional signage) | -                   | 5%                           | \$75,000      | 0.42                  | HSIP, SS4A, ATP                   |                                   | Medium-term                |
| Main St and Quintana Rd     | Bike Box   | S20PB               | 15%                          | \$15,000      | 52.99                 | HSIP, SS4A                        |                                   | Medium-term                |
| Main St and Quintana Rd     | Reduce large curve radius to encourage lower speed   | -                   | 5%                           | \$20,000      | 1.58                  | SS4A                              |                                   | Medium-term                |
| Main St and Quintana Rd     | Advance signal warning signs   | S10                 | 30%                          | \$7,500       | 211.98                | HSIP, SS4A                        |                                   | Short-term                 |
| Main St north of Highway 41 | Reorganize lane widths between NB and SB bike lanes  | -                   | 5%                           | \$200,000     | 1.86                  | HSIP, SS4A                        |                                   | Medium-term                |

# MORRO BAY

## Local Roadway Safety Plan



| Location                          | Improvements  | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs | Benefit-Cost<br>Ratio | Major Potential<br>Funding Source         | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|-----------------------------------|---|---------------------|------------------------------|---------------|-----------------------|---|-----------------------------------|----------------------------|
| Main St north of Highway 41       | Two-Way Cycle track along Main St                                   | -                   | 5%                           | \$1,750,000   | 0.21                  | SS4A, Active Transportation Program (ATP) |                                   | Long-term                  |
| Main St north of Highway 41       | Multiuse Path - Bike Lane/Sidewalk                                  | -                   | 5%                           | \$1,500,000   | 0.25                  | SS4A, Active Transportation Program (ATP) |                                   | Long-term                  |
| Quintana Rd & South Bay Blvd      | Install Right Turn Pocket SB  | NS17                | 20%                          | \$15,000      | 2.98                  | HSIP                                      |                                   | Medium-term                |
| Quintana Rd & South Bay Blvd      | Install Left-Turn Pocket on northbound                              | NS18                | 35%                          | \$15,000      | 5.21                  | HSIP                                      |                                   | Medium-term                |
| Quintana Rd & South Bay Boulevard | Install Advanced Signage - Retroreflective or Flashing Beacon       | NS09                | 30%                          | \$5,000       | 13.39                 | HSIP                                      |                                   | Short-term                 |
| Quintana Rd & South Bay Boulevard | Install Flashing Beacon over Intersection                           | NS08                | 25%                          | \$12,000      | 2.79                  | HSIP                                      |                                   | Long-term                  |
| Quintana Rd & South Bay Boulevard | Install All-Way Stop (warrant needed, previously did meet warrants) | NS02                | 50%                          | \$7,500       | 14.88                 | HSIP                                      |                                   | Long-term                  |
| Quintana Rd & South Bay Boulevard | Traffic Signal (warrant needed,                                     | NS03                | 30%                          | \$378,000     | 0.18                  | HSIP, SS4A                                |                                   | Long-term                  |

# MORRO BAY

## Local Roadway Safety Plan



| Location                                       | Improvements   | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs                      | Benefit-Cost<br>Ratio | Major Potential<br>Funding Source              | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|--|--|---------------------|------------------------------|------------------------------------|-----------------------|--|-----------------------------------|----------------------------|
|  | previously did meet warrants)  |                     |                              |                                    |                       |  |                                   |                            |
| South Bay Blvd from Quintana Rd to City Limits | Close off Park View drive to vehicle traffic (Closed during pandemic, look into permanent closure) | -                   | 5%                           | \$12,000                           | 28.56                 | Climate Action Grant, City-funded, State Parks |                                   | Long-term                  |
| South Bay Blvd from Quintana Rd to City Limits | Install rumble/mumble Strips on centerline and edgelines (bicycle considerations needed)           | R31                 | 15%                          | \$50,000                           | 42.83                 | HSIP   |                                   | Medium-term                |
| South Bay Blvd from Quintana Rd to City Limits | Widen Bicycle Lanes or Install Multiuse Path (including bicycle and pedestrians lanes)             | -                   | 5%                           | \$2,000,000 - \$2,500,000 per mile | -                     | HSIP, SS4A, ATP                                |                                   | Long-term                  |
| Main St & Radcliffe St (up to Errol St)        | Complete sidewalk gap  | R34PB               | 80%                          | \$216,000                          | 4.39                  | HSIP, SS4A, ATP, FEMA                          |                                   | Medium-term                |

# MORRO BAY

## Local Roadway Safety Plan



| Location                 | Improvements   | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs | Benefit-Cost<br>Ratio | Major Potential<br>Funding Source | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|--------------------------|--|---------------------|------------------------------|---------------|-----------------------|-----------------------------------|-----------------------------------|----------------------------|
| Main St & Radcliffe St   | Signal warrant analysis  | -                   | 5%                           | \$5,000       | 11.87                 | City-funded                       |                                   | Medium-term                |
| Main St & Radcliffe St   | Re-align intersection for better sight distance  | NS11                | 20%                          | \$25,000      | 9.49                  | City-funded                       |                                   | Long-term                  |
| Main St & Radcliffe St   | Signage or flashing beacons to alter drivers on Main Street if potential conflicting movements | NS06                | 15%                          | \$25,200      | 7.06                  | HSIP                              |                                   | Short-term                 |
| Main St & San Jacinto St | Close off Alder Ave  | -                   | 5%                           | \$25,000      | 2.10                  | City-funded                       |                                   | Long-term                  |
| Main St & San Jacinto St | Install right-turn lane on southbound Main Street at San Jacinto St                            |                     | 5%                           | \$15,000      | 20.98                 | HSIP                              |                                   | Medium-term                |
| Main St & Yerba Buena St | Install stop sign (review warrants)  | NS02                | 50%                          | \$12,400      | 35.59                 | HSIP                              |                                   | Medium-term                |
| Main St & Yerba Buena St | Install traffic signal (review warrants)   | NS03                | 30%                          | \$378,000     | 0.70                  | HSIP                              |                                   | Long-term                  |
| Main St & Yerba Buena St | Install mini-roundabout  |                     | 5%                           | \$250,000     | 0.18                  | HSIP                              |                                   | Medium-term                |

# MORRO BAY

## Local Roadway Safety Plan



| Location                 | Improvements  | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs | Benefit-Cost<br>Ratio | Major Potential<br>Funding Source | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|--------------------------|---|---------------------|------------------------------|---------------|-----------------------|-----------------------------------|-----------------------------------|----------------------------|
| Main St & Yerba Buena St | Install high-visibility crosswalks  | NS21PB              | 35%                          | \$50,000      | 6.18                  | HSIP, ATP, SS4A                   | X                                 | Medium-term                |
| Main St & Yerba Buena St | Install bicycle facilities to connect end of Main Street bicycle lanes to Highway 1 (striping, crosswalks, green paint) |                     | 5%                           | \$10,000      | 4.41                  | HSIP, ATP                         |                                   | Medium-term                |
| Main St & Dunes St       | Install high-visibility crosswalks and curb-bulb outs   | NS21PB              | 35%                          | \$100,000     | 2.21                  | HSIP, SS4A, ATP                   | X                                 | Medium-term                |
| Main St & Dunes St       | Install all-way stop (review warrants)  | NS02                | 50%                          | \$12,400      | 1.28                  | HSIP                              |                                   | Medium-term                |
| Main St & Dunes St       | Install 'cross traffic does not stop signage' on minor approaches   | -                   | 5%-                          | \$1,500       | 10.54                 | City-funded                       |                                   | Short-term                 |

# MORRO BAY

## Local Roadway Safety Plan



| Location                       | Improvements   | HSIP/<br>LRSM<br>ID | Crash<br>Reduction<br>Factor | 20-year Costs | Benefit-Cost<br>Ratio                                | Major Potential<br>Funding Source | Eligible for<br>HSIP<br>Set Aside | Implementation<br>Priority |
|--------------------------------|--|---------------------|------------------------------|---------------|--|-----------------------------------|-----------------------------------|----------------------------|
| Main St & Piney Wy             | Install protected crosswalk (RRFB) across Main St (including curb ramps and bulb-outs) | NS22PB              | 35%                          | \$50,000      | n/a (there were no pedestrian crashes observed here) | HSIP                              | X                                 | Medium-term                |
| Main St & Piney Wy             | Striping to reduce width of lanes and reduce crossing distance for pedestrians         | -                   | 5%                           | \$5,000       | n/a (there were no pedestrian crashes observed here) | City-funded                       |                                   | Short-term                 |
| Main St & Piney Wy             | Realign intersection to reduce speeding  | -                   | 5%                           | \$20,000      | n/a (there were no pedestrian crashes observed here) | City-funded                       |                                   | Long-term                  |
| Main St & Piney Wy             | Install speed signs along Main St  | R26                 | 30%                          | \$25,000      | n/a (there were no pedestrian crashes observed here) | HSIP, City-funded                 |                                   | Short-term                 |
| Ironwood Avenue & Paula Avenue | Install stop signs at Paula Avenue (if warranted)                                      | NS02                | 50%                          | \$5,000       | 8.09   | HSIP, City-funded                 |                                   | Medium-term                |



### 9.3 Traffic Calming Improvements

The reduction of speeding and cut-through traffic on local and neighborhood streets is a priority of the City of Morro Bay. This section provides a toolbox of traffic calming improvements that can be implemented and a general process for implementing them. The crash history and summary of community input found these streets to be the main hot spots that would be candidates for future traffic calming analysis and projects:

- Ironwood Avenue
- San Jacinto Avenue
- Kern Avenue
- Avalon Avenue
- Piney Way
- Sandalwood Avenue
- Pacific Street
- Harbor Street

#### Traffic Calming Toolbox

The traffic calming toolbox contains different potential improvements that can be implemented on local and residential streets to calm traffic. The tools are classified as either Tier 1 or Tier 2. Tier 1 solutions consist of tools that are typically low-cost and don't require extensive design or study, which means they are quicker and easier to implement. Tier 2 solutions tend to cost more and require more involved study, design, outreach, and construction processes. These solutions may be eligible for grant funding, as discussed below. **Table 10** shows the improvements, the tiers, and the costs from \$ (least expensive) to \$\$\$ (most expensive). The Traffic Calming Toolbox examples can be found in **Appendix B**.

**Table 10 - Traffic Calming Toolbox**

| Traffic Calming Improvement                            | Project Tier | Cost (\$-\$\$\$) |
|--|--------------|------------------|
| Striping   | Tier 1       | \$               |
| Speed Signage  | Tier 1       | \$               |
| Speed Legends  | Tier 1       | \$               |
| High Visibility Crosswalks                             | Tier 1       | \$               |
| Signed turn restrictions (neighborhood access control) | Tier 1       | \$               |
| Curb Extensions (bulb-outs)                            | Tier 2       | \$\$             |
| Pedestrian Refuge Islands                              | Tier 2       | \$\$             |



| Traffic Calming Improvement                      | Project Tier | Cost (\$-\$\$\$) |
|--|--------------|------------------|
| Road diets/toning                                | Tier 2       | \$\$             |
| Mini-roundabout                                  | Tier 2       | \$\$             |
| Speed humps                                      | Tier 2       | \$               |
| Speed bumps                                      | Tier 2       | \$               |
| Speed kidneys                                    | Tier 2       | \$               |
| Speed table                                      | Tier 2       | \$               |
| Raised Crosswalks                                | Tier 2       | \$\$             |
| Raised Intersections                             | Tier 2       | \$\$             |
| Lateral shifts                                   | Tier 2       | \$\$\$           |
| Chicanes/chokers                                 | Tier 2       | \$\$\$           |
| Forced turn island (neighborhood access control) | Tier 2       | \$\$\$           |
| Diagonal diverter (neighborhood access control)  | Tier 2       | \$\$\$           |

### Traffic Calming Implementation Process

Implementing traffic calming features should generally follow the following process:

#### 1) Project Initiation

A project would be initiated by a citizen request or identification of an issue by City staff or member of City board. City of Morro Bay Public Works staff will review the location in coordination with the Police Department and determine if traffic calming solutions are appropriate for the issue described. If the traffic and/or safety concern is determined to be outside the purview of Public Works, the request will be referred to the appropriate City Department to investigate other potential solutions.

#### 2) Project Identification

After determining that traffic calming improvements are appropriate for the identified issue and location, Public Works staff will conduct a preliminary site assessment to understand the site's context and review any existing safety and traffic data. Public Works staff may also hold a meeting with the residents to gather more information on the issue. Following this process, Public Works staff will determine if Tier 1 (cheaper and quicker) or Tier 2 (more expensive and longer-term) solutions are appropriate.

#### 3) Project Recommendations

Following the project identification stage, Public Works staff will review the Traffic Calming Toolbox and use engineering judgement to determine which treatments are appropriate at the location. For Tier 1 projects, Public Works staff can inform residents and work to implement the solutions quickly. Tier 2 solutions require additional study and outreach to select and implement. Public Works staff will first conduct a project scoping to collect the necessary data, such as volumes and crash activity. Public Works staff will then work with the local community to review and screen the potential improvements from the Traffic Calming Toolbox to determine the appropriate project recommendations.



#### 4) Project Implementation

Tier 1 projects can be implemented by Public Works depending on available funding and scheduling. Tier 2 projects can be prioritized for funding and implementation based on citizen demand, effectiveness, and cost. Some Tier 2 projects may qualify for and require grant funding, such as HSIP, SS4A, SLOCOG regional funding or ATP funding, to be implemented.

#### 5) Project Evaluation

Following implementation, Public Works staff should monitor the projects for their effectiveness in calming traffic and potentially preventing crashes. This can include monitoring speed, traffic behavior, and soliciting input from residents. If a Tier 1 project is not deemed effective, the Public Works staff should consider a Tier 2 project or changes to the project. If a Tier 2 project is not deemed effect, Public Works staff should review the toolbox for any additional improvements or changes to the project scope.

### 9.4 Non-Infrastructure Improvements

These identified countermeasures were derived from the crash analysis and build on the actions identified in Section 9.2. These relate to the additional E's of Traffic Safety outside of engineering, which include Enforcement, Education, Emergency Services and Emerging Technologies.

**Table 11 – Non-Engineering Safety Strategy Countermeasures**

| PROPOSED COUNTERMEASURE  | POTENTIAL PARTNERS  | EXAMPLES OF COUNTERMEASURE   |
|--|---|--|
| <b>ENFORCEMENT</b>   |   |  |
| Increase visibility of enforcement program for speeding and stop sign/signal running | Morro Bay Police Department, California Highway Patrol, California Office of Traffic Safety | <a href="#">CHP's Regulate Aggressive Driving and Reduce Speed (RADARS) program</a>  |
| Increased enforcement near pedestrian and bicyclist activity hot spots               | Morro Bay Police Department, California Office of Traffic Safety                            | Obtain grant funding for additional enforcement of drivers near pedestrian crossings |
| Increased enforcement near school zones  | Morro Bay Police Department, Local school districts, California Office of Traffic Safety    | Obtain grant funding for additional personnel in school zones                        |
| <b>EDUCATION</b>   |   |  |
| Campaign to target speeding drivers and drivers running                              | Morro Bay Public Works, SLOCOG  | <a href="#">CHP's Regulate Aggressive Driving and Reduce Speed (RADARS) program</a>  |
| Bicycle and pedestrian safety campaign   | Morro Bay Public Works, SLOCOG  | <a href="#">SCAG's "Go Human" campaign</a>   |
| Coordinate safety education campaigns with SLOCOG                                    | Morro Bay Public Works, SLOCOG  | Coordination of safety education with new SLOCOG regional projects                   |



| PROPOSED COUNTERMEASURE  | POTENTIAL PARTNERS   | EXAMPLES OF COUNTERMEASURE   |
|--|--|--|
| Explore safe routes to school education grants to expand program                         | School districts, local law enforcement, SLOCOG                            | <a href="#">Safe Routes to School Program</a> (funded by Caltrans)                                   |
| EMERGENCY RESPONSE   |  |  |
| Coordinate with emergency services on potential improvements and other safety projects   | Morro Bay Police Department, Morro Bay Fire Department, ambulance agencies | Incorporating law enforcement/fire department as stakeholders on transportation improvement projects |
| Regularly review emergency response data to supplement crash data and identify hot spots | Morro Bay Police Department, Morro Bay Fire Department, ambulance agencies | Adjust safety project development processes to include emergency response and fire department data   |

## 10. Funding Sources & Next Steps

### 10.1 Funding Sources

Competitive funding resources are available to assist in the development and implementation of safety projects in Morro Bay. The City should continue to seek available funding and grant opportunities from local, state, and federal resources to accelerate their ability to implement safety improvements throughout Morro Bay. This section provides a high-level introduction to some of the main funding programs and grants for which the City can apply.

#### 10.1.1 Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) is a federally-funded, Caltrans-managed program that apportions funding as a lump sum for each state, which is then divided among apportioned programs. These flexible funds can be used for projects to preserve or improve safety conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for non-motorized transportation, and other project types. Safety improvement projects eligible for this funding include:

- Curb-extensions
- Pedestrian warning flashing beacons
- High visibility crosswalks
- Other projects listed in the Caltrans Local Road Safety Manual

California’s local HSIP focuses on infrastructure projects with national recognized crash reduction factors. Normally HSIP call-for-projects is made at an interval of one to two years. The applicant must be a city, a county, or a tribal government federally recognized within the State of California.

Additional information regarding this program at the Federal level can be found online at: <https://safety.fhwa.dot.gov/hsip/>. California specific HSIP information – including dates for upcoming call for projects - can be found at: <http://www.dot.ca.gov/hq/LocalPrograms/hsip.html>. HSIP Cycle 12 applications are expected to be due in September 2024.



### 10.1.2 Caltrans Active Transportation Program

Caltrans Active Transportation Program (ATP) is a statewide funding program, created in 2013, consolidating several federal and state programs. The ATP funds projects that encourage increased mode share for walking and bicycling, improve mobility and safety for non-motorized users, enhance public health, and decrease greenhouse gas emissions. Projects eligible for this funding include:

- Bicycle and pedestrian infrastructure projects
- Bicycle and pedestrian planning projects (e.g., safe routes to school)
- Non-infrastructure programs (education and enforcement)

This program funding is provided annually. The ATP call for projects typically comes out in the spring. Information on this program and cycles can be found online at: <http://www.dot.ca.gov/hq/LocalPrograms/atp/>.

### 10.1.3 California SB 1

The California SB 1 is a landmark transportation investment to rebuild California by fixing neighborhood streets, freeways, and bridges in communities across California and targeting funds toward transit and congested trade and commute corridor improvements.

California's state-maintained transportation infrastructure will receive roughly half of SB 1 revenue: \$26 billion. The other half will go to local roads, transit agencies and an expansion of the state's growing network of pedestrian and cycle routes. Each year, this new funding will be used to tackle deferred maintenance needs both on the state highway system and the local road system, including:

- Local Street and Road Maintenance and Rehabilitation: \$1.5 billion
  - This funding is dedicated to improve local road maintenance, rehabilitation, and/or safety through projects such as restriping and repaving.
- Bike and Pedestrian Projects: \$100 million
  - This will go to cities, counties, and regional transportation agencies to build or convert more bike paths, crosswalks, and sidewalks. It is a significant increase in funding for these projects through the ATP.
- Local Planning Grants: \$25 million

### 10.1.4 California Office of Traffic Safety Grants

This program has funding for projects related to traffic safety, including transportation safety education and encouragement activities. Grants applications must be supported by local crash data (such as the data analyzed in this report) and must relate to the following priority program areas:

- Alcohol Impaired Driving
- Distracted Driving
- Drug-Impaired Emergency Medical Services



- Motorcycle Safety
- Occupant Protection
- Pedestrian and Bicycle Safety
- Police Traffic Services
- Public Relations, Advertising, and Marketing Program
- Roadway Safety and Traffic Records

### 10.1.5 SLOCOG's Community Betterments Grant Program

Community Betterments is a catch-all term for smaller scale community level infrastructure improvements that support sustainable transportation goals set by SLOCOG and SLOCOG's member agencies. Funding for the program includes uncommitted funds from the Surface Transportation Block Grant (STBG) and CMQA and CRP. Priority shall be given to projects that have demonstrated performance benefits in mobility and accessibility, safety and security, and healthy communities.

Goal: Fund community transportation projects that improve safety, mobility, access, and supports public health goals throughout the region.

Objectives:

1. Support local agency planning processes and priorities.
2. Document local agency public engagement process(es)
3. Evaluate how diversity, equity, and inclusion is part of the local planning process.
4. Support statewide goals to reduce GHG and vehicle miles traveled.
5. Integrate best practices, where appropriate, specific to safety and mobility.

### 10.1.6 Federal Emergency Management Agency (FEMA) or FHWA Emergency Funding

FEMA offers funding for reconstruction of damaged roadways and funding for resilient infrastructure. These funds can be used to repair and improve roadways damaged in disaster events in the City of Morro, such as the segment of Main Street near Radcliffe Ave, or the shoulder of South Bay Boulevard. More information can be found here: <https://www.fema.gov/grants/>

### 10.1.7 Safe Streets and Roads for All (SS4A) Grant Program

This program has allocated \$1B annually for the next 3 years for local cities, counties, MPOs, and other roadway owners (excepting state DOTs) for safety improvement grants for safety planning, education, enforcement, and roadway improvements. This program is not benefit / cost based. Evaluation criteria are oriented to the project's alignment with the Safe Systems approach. There is a 20% local match requirement (can be in-kind contribution via staff billable hours). Planning grants are open to any eligible agency and Implementation grants are open to agencies with a completed safety plan such as a Local Roadway Safety Plan. Planning grants are expected to



range from \$100K to \$1M and Implementation grants are expected to range from \$1M to \$20M. Grant applications are expected to be due in July 2024.

This Local Roadway Safety Plan serves as the City of Morro Bay’s ‘Action Plan’, making the City eligible for Implementation Grant funding. The responses to the [SS4A Self-Certification Eligibility Worksheet](#) are in **Table 12** below. This Plan answers “yes” to Questions 3, 7, and 9 (all required), and answers “yes” to Questions 1, 2, 4, 6, and 8 (5 out of 4 required remaining questions).

**Table 12 – SS4A Self-Certification Eligibility Table**

| No. | Question  | Response  |
|-----|---|---|
| 1   | <p>Are both of the following true?</p> <ul style="list-style-type: none"> <li>• Did a high-ranking official and/or governing body in the jurisdiction publicly commit to an eventual goal of zero roadway fatalities and serious injuries?</li> <li>• Did the commitment include either setting a target date to reach zero, OR setting one or more targets to achieve significant declines in roadway fatalities and serious injuries by a specific date?</li> </ul>   | Yes   |
| 2   | To develop the Action Plan, was a committee, task force, implementation group, or similar body established and charged with the plan’s development, implementation, and monitoring?   | Yes – the Public Agency Working Group and the Public Works Advisory Group |
| 3   | <p>Does the Action Plan include all of the following?</p> <ul style="list-style-type: none"> <li>• Analysis of existing conditions and historical trends to baseline the level of crashes involving fatalities and serious injuries across a jurisdiction, locality, Tribe, or region;</li> <li>• Analysis of the location where there are crashes, the severity, as well as contributing factors and crash types;</li> <li>• Analysis of systemic and specific safety needs is also performed, as needed (e.g., high risk road features, specific safety needs of relevant road users; and,</li> <li>• A geospatial identification (geographic or locational data using maps) of higher risk locations.</li> </ul> | Yes   |
| 4   | <p>Did the Action Plan development include all of the following activities?</p> <ul style="list-style-type: none"> <li>• Engagement with the public and relevant stakeholders, including the private sector and community groups;</li> <li>• Incorporation of information received from the engagement and collaboration into the plan; and</li> <li>• Coordination that included inter- and intra-governmental cooperation and collaboration, as appropriate.</li> </ul>   | Yes   |
| 5   | <p>Did the Action Plan development include all of the following?</p> <ul style="list-style-type: none"> <li>• Considerations of equity using inclusive and representative processes;</li> <li>• The identification of underserved communities through data; and</li> <li>• Equity analysis, in collaboration with appropriate partners, focused on initial equity impact assessments of the proposed projects and strategies, and population characteristics.</li> </ul>  | No  |
| 6   | Are both of the following true?   | Yes   |



| No. | Question   | Response                   |
|-----|--|----------------------------|
|     | <ul style="list-style-type: none"> <li>The plan development included an assessment of current policies, plans, guidelines, and/or standards to identify opportunities to improve how processes prioritize safety; and</li> <li>The plan discusses implementation through the adoption of revised or new policies, guidelines, and/or standards.</li> </ul> |                            |
| 7   | Does the plan identify a comprehensive set of projects and strategies to address the safety problems in the Action Plan, time ranges when projects and strategies will be deployed, and explain project prioritization criteria?   | Yes                        |
| 8   | Does the plan include all of the following? <ul style="list-style-type: none"> <li>A description of how progress will be measured over time that includes, at a minimum, outcome data.</li> <li>The plan is posted publicly online.</li> </ul>   | Yes                        |
| 9   | Was the plan finalized and/or last updated between 2018 and June 2024?   | Yes, adopted February 2024 |

### 10.1.8 Infrastructure Investment and Jobs Act

In November 2021, the President signed into law the \$1.2 trillion Infrastructure Investment and Jobs Act. In addition to the SS4A grant program described above, this law provides billions of dollars in additional funding for improvements and investment in the transportation sector nationwide. The law provides \$30 billion in funding over 5 years for competitive RAISE grants for transportation projects, as well as additional funding for repair and environmental mitigation projects. As these grant programs continue to be developed, City can position itself by identifying potential projects and programs to pursue.

## 10.2 Implementation Plan

Once the Local Roadway Safety Plan has been completed, the City can plan to regularly review and monitor crash data for trends and changes. The City can also plan to prioritize and implement certain improvements that were identified in this plan.

### 10.2.1 Monitoring

The City can plan to regularly monitor the success of the LRSP and its related implementations by performing the following steps. This before and after analysis can be performed every second year. The City can also meet with the Morro Bay Police Department on a regular basis to discuss roadway safety issues and compare to the latest crash analysis.

- Pull yearly crash data from Crossroads database to determine year-over-year trend
- Utilize Crossroads or GIS software to review the number of crashes occurring at specific locations. Locations where improvements have been made should receive priority for monitoring.
- Based upon changes in crash activity, determine efficacy of improvements and adjust strategies going forward

### 10.2.2 Analysis Update

The City can plan to update the analysis every two years as part of a monitoring program, as described in **Section 10.2.1**. Every 4 years the City will perform a major update to the analysis



and the Local Roadway Safety Plan by performing the following steps. This update will maintain eligibility for the HSIP grant funding for the City. This analysis should continue to focus on both systemic and location-specific safety needs.

1. Obtain updated Statewide Integrated Traffic Records System (SWITRS) crash data from the Crossroads database.
2. Use Excel software to update the crash trend analysis completed in Section 7, continue to compare new crash to historic trends.
3. Update the roadway shapefile with any new or upgraded roadways.
4. Update the intersection shapefile with any new or upgraded intersections.
5. Re-run the GIS crash tool to determine the number of crashes at intersections and roadways within the updated study period. The City can plan to run the crash tool for all crashes, as well as the crash types identified in **Section 3.2**.
6. Update the crash analysis performed in this report, including the crash analysis tables shown in **Section 7.10**.
7. Review the Crash Toolbox to determine if any additional countermeasures should be considered for implementation in the City.

### 10.2.3 Implementation Strategies

The opportunities identified in this report provide systemic and location-specific countermeasures that can be implemented within the City. Implementation will be dictated by funding and available resources, this guidance is preliminary and subject to change. Over the near-term and mid-term, the City can concentrate its efforts on the following emphasis areas.

- Speeding
- Cut-through Traffic
- Drivers Ignoring Signals and Stop Signs
- Lighting
- Pedestrians
- Bicyclists

Analysis conducted at the citywide level indicated that these factors were some of the most frequent influences contributing to crashes within the City. The countermeasure opportunities previously discussed in this report for both systematic and project-specific improvements can be used as a basis for developing projects at locations where addressing these focus areas would be of the most benefit. Projects that address these focused areas citywide can be developed with a high benefit-to-cost ratio (by applying City-wide crash rates), allowing competitive projects to be developed even at sites with little to no direct crash history, but with conditions that might contribute to future crashes. For location-specific improvements, the City can utilize benefit-cost ratio calculations to help prioritize projects as funding and resources become available. The



countermeasure/improvement table in **Table 8** also identified a potential prioritization timeline for each improvement, based on cost, effectiveness and feasibility.

This project prioritization process will help the City be ready for the funding opportunities identified in **Section 10.1**. Project prioritization will also help to guide the projects as they are taking into the design and construction project. Coordination with City departments will be key in the completion of these implementations.

The City can also plan to implement the non-engineering improvements identified throughout this report, including actions related to Enforcement, Education, and Emergency Services. These actions will require coordination with internal and external stakeholders, such as City departments, law enforcement, local government organizations, and local community organizations. Early buy-in and engagement from these stakeholders will be key to the success of these actions.

To aid in these actions, the City can assemble a 'Task Force' of representatives from different City departments, such as Public Works, Community Development, and Public Safety. This task force will be instrumental in the monitoring, analysis update, project development and project implementation outlined in this plan.

### 10.3 Next Steps

The City has completed this LRSP to guide the process of future transportation safety improvements for years to come. In addition to the actions identified in the Implementation Plan, the City can perform the following to guide the success of this LRSP and the safety efforts overall.

- Develop investment program to help achieve the City's crash reduction goals.
- Work with state and partner agencies on implementation of large-scale programs and policies.
- Incorporate safety analysis findings in future updates of safety programs.
- Monitor statewide safety priorities, guidance, and funding opportunities.



## Appendix A – Online Engagement Materials

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## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type  | Comment   | Latitude  | Longitude   |
|----------|-------|---|-----------|-------------|
| 09/01/23 | Car   | Speeding in this area--need for posted speed limits   | 35.365014 | -120.843295 |
| 09/01/23 | Car   | Faded striping and marking on various streets, crosswalks, and roundabouts  | 35.361698 | -120.843327 |
| 09/01/23 | Bike  | Vehicles traveling east and west on Pacific Street run stop signs around this intersection, causing close calls with bike and pedestrian traffic. Drivers misinterpret the added stop signs as indicating a 4-way stop                  | 35.364909 | -120.849938 |
| 09/01/23 | Bike  | Narrow bike lane on South Bay from Quarry Trail to State Park Road--add rumble strips to alert drivers that drift into bike lanes   | 35.346568 | -120.825652 |
| 09/01/23 | Car   | Drivers speed along Kern Ave through neighborhoods. Calming measures and/or posted signage could help.  | 35.360482 | -120.841584 |
| 09/01/23 | Car   | Drivers speed coming from SR-1 on Easter Ave. near Coral Ave. Posted signage or traffic calming measures requested in the area.   | 35.396454 | -120.862528 |
| 09/01/23 | Car   | Drivers speed coming from on Ironwood from San Jacinto to Del Mar Park. Posted signage or traffic calming measures requested in the area.   | 35.394755 | -120.855611 |
| 09/01/23 | Car   | Signage needed on Morro Bay Blvd to prevent blocked traffic on main roadway during peak drive-thru hours  | 35.366006 | -120.842662 |
| 09/01/23 | Other | Reduce red curb to allow for additional parking with additional parking stall striping at 698 Morro Bay   | 35.365896 | -120.845606 |
| 09/01/23 | Car   | Add parking at Yerba Buena on Main St.  | 35.404549 | -120.867505 |
| 09/01/23 | Other | E-bikes are staged in the existing red zone; make existing green parking space into white loading space so that there is room to accommodate bikes loading/unloading and a place for outfitting and returning bikes.                    | 35.363606 | -120.852495 |
| 09/01/23 | Walk  | Unsafe to cross over Embarcadero from the west side for pedestrians coming to visit the museum. Consider crosswalk, ADA ramps, flashing beacon, striping in area.   | 35.363841 | -120.852574 |
| 09/01/23 | Walk  | Pedestrians not using crosswalks; improve pavement striping/markings and consider additional signage or crosswalk elements to encourage safe pedestrian crossing  | 35.367775 | -120.853808 |
| 09/01/23 | Car   | Pavement markings for through/left for both northbound and southbound traffic on Main St. at Main/Beach St. intersection should revert to original state instead of dedicated left-turn pocket with the right lane being through/right. | 35.368763 | -120.849984 |
| 09/01/23 | ADA   | Need for handicap on-street parking on Surf St.   | 35.369947 | -120.849964 |
| 09/01/23 | Walk  | High-vis striping in crosswalk appears to be insufficient for pedestrian safety at Morro Bay Blvd crossing--vehicles speed in this area and limited visibility on the hill's crest/width of crossing create risk for pedestrian safety  | 35.365969 | -120.842454 |
| 09/01/23 | Walk  | Elena St. and Greenwood Ave. intersection: high amount of pedestrian that walk down Greenwood--downhill traveling vehicles heading west of Elena will not stop--has caused many close calls   | 35.390979 | -120.855745 |
| 09/01/23 | Walk  | No sidewalks for pedestrians to walk on without being in the bike lane on Main St. from Radcliff to Errol (east side)   | 35.373968 | -120.851442 |
| 09/01/23 | Walk  | No sidewalks; gaps in sidewalks or gaps in sidewalk for pedestrians to walk on without being in the bike lane   | 35.379952 | -120.856677 |
| 09/01/23 | Car   | Vehicles frequently run stop sign on San Jacinto heading west at Main St. intersection--bring more attention to stop sign or create additional signage to support full stop   | 35.393782 | -120.860346 |
| 09/03/23 | Car   | 1.Left turn access to Main Street from Radcliff especially on weekends 3 comments   | 35.37365  | -120.85143  |
| 09/03/23 | Car   | Left turn access to Main Street from Radcliff especially on weekends 3 comments   | 35.373913 | -120.85139  |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type  | Comment   | Latitude  | Longitude   |
|----------|-------|---|-----------|-------------|
| 09/03/23 | Car   | San Jacinto and Sandalwood stop sign  | 35.393526 | -120.863265 |
| 09/03/23 | Car   | Left turn access to Main Street from Radcliff especially on weekends 3 comments   | 35.374003 | -120.851352 |
| 09/03/23 | Car   | Left turn access to Main Street from Radcliff especially on weekends 3 comments   | 35.373883 | -120.851416 |
| 09/03/23 | Car   | Speeding on Avalon  | 35.385839 | -120.85457  |
| 09/03/23 | Car   | Stop sign on Main at Pacific. Vehicles on Pacific there is a stop sign on Main and don't yield the right of way after coming to a stop.   | 35.364948 | -120.849751 |
| 09/03/23 | Car   | Stop signs at Elena and Greenwood   | 35.391265 | -120.855884 |
| 09/03/23 | Car   | CA41 and Main. Stripe dedicated left and right turn lanes under CA1 bridge to Main  | 35.380173 | -120.855072 |
| 09/03/23 | Car   | Speeding on Ironwood and stop sign at Elena   | 35.391546 | -120.854497 |
| 09/03/23 | Walk  | Address pedestrian safety. Pedestrians can't walk from pedestrian bridge to Yerba Buena/Main intersection.  | 35.404435 | -120.867205 |
| 09/03/23 | Car   | Speeding on Kern up to 80mpy  | 35.359675 | -120.841387 |
| 09/03/23 | Car   | Main and Mindoro speeding   | 35.400585 | -120.863428 |
| 09/03/23 | Car   | Speeding on Piney   | 35.361723 | -120.845344 |
| 09/03/23 | Car   | Replace stop signs at Quintana Shopping Center  | 35.369083 | -120.843915 |
| 09/03/23 | Walk  | Pedestrian bridge at Alva Paul Creek at Main adjacent to existing bridge  | 35.398082 | -120.861887 |
| 09/03/23 | Car   | Close Vehicle access to parking lots at Morro Rock.   | 35.374124 | -120.857815 |
| 09/03/23 | Car   | Close Vehicle access to parking lots at Morro Rock.   | 35.372459 | -120.861072 |
| 09/03/23 | Other | General Comments<br>1. Get people to obey stop signs<br>2. Every street has speed and aggressive behavior problems<br>3. Have speed bumps like San Luis Obispo  | 35.373784 | -120.843854 |
| 09/03/23 | Car   | Speeding generally on San Jacinto and especially at Greenwood   | 35.394437 | -120.856999 |
| 09/03/23 | Walk  | Pedestrian safety crossing San Jacinto  | 35.394154 | -120.858171 |
| 09/03/23 | Car   | San Jacinto appears to be a collector street but performs as a minor arterial   | 35.393916 | -120.859012 |
| 09/03/23 | Car   | Ironwood appears to be a collector but performs as a minor arterial   | 35.393742 | -120.855253 |
| 09/03/23 | Car   | Quintana appears to be collector but performs as an arterial  | 35.370597 | -120.846648 |
| 09/03/23 | Car   | Piney appears to be a collector but performs as an arterial   | 35.358512 | -120.844597 |
| 09/03/23 | Car   | Avalon appears to be a collector but performs as an arterial  | 35.385332 | -120.856158 |
| 09/03/23 | Car   | Northbound traffic on Main at Yerba Buena fail to stop and accelerate to make light on CA1  | 35.404419 | -120.867692 |
| 09/03/23 | Car   | The well known problem of the CA41/Main intersection.   | 35.380326 | -120.855856 |
| 09/03/23 | Walk  | Pedestrian crossing CA41 is difficult.  | 35.381652 | -120.851991 |
| 09/03/23 | Walk  | Pedestrian bridge crossing Morro Creek at Main  | 35.378162 | -120.854206 |
| 09/03/23 | Walk  | Condition of pedestrian sidewalk on N. Main between Radcliff and Preston Lane and also between Preston and Errol St to a lesser extent.   | 35.375234 | -120.852296 |
| 09/03/23 | Walk  | Generally complete pedestrian sidewalks along N. Main.  | 35.375763 | -120.852532 |
| 09/03/23 | Bike  | Bike path on southbound N. Main is 3' or less with weeds often hanging over. Provide striped 1' buffer between bikes and cars, shift striped centerline on Main to the east 1' adjust northbound bike lane as required. | 35.384337 | -120.856768 |
| 09/05/23 | Other | test  | 35.60009  | -120.461998 |
| 09/06/23 | Car   | Left turn heading west onto Hwy 41 when exiting Miner's parking lot is dangerous. A caution flashing intersection sign located on 41 may be a remedy.   | 35.381826 | -120.851524 |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type | Comment  | Latitude  | Longitude   |
|----------|------|--|-----------|-------------|
| 09/06/23 | Car  | Pedestrian crossing headed east from corner of Main and San Jacinto is difficult at peak traffic periods. Drivers on Hwy 1 turning Right onto Main St. are unaware of pedestrians crossing.  | 35.393782 | -120.860346 |
| 09/07/23 | Bike | Cars don't wait their turn and ignore cyclists.  | 35.368257 | -120.854158 |
| 09/07/23 | Bike | Northbound on Quintanna Rd, making left at Morro Bay Blvd has high speeds and cyclists are exposed to folks racing on to and off the highway interchange. Reroute cyclists before intersection if possible   | 35.366601 | -120.840312 |
| 09/07/23 | Walk | Sketchy intersection for bikes and peds.   | 35.37124  | -120.850181 |
| 09/07/23 | Bike | One -way bike and pedestrian path along State Park Rd. Remove one direction of vehicular travel on lower state park road. Safer crossing at State Park Rd and South Bay Blvd.  | 35.34518  | -120.841644 |
| 09/07/23 | Car  | It is dangerous to turn left off Radcliff onto Main. Also, when turning left off Main onto Radcliff there needs to be a better (less worn off) left turn lane.   | 35.373941 | -120.851461 |
| 09/07/23 | Bike | Good thing I was going slow and careful because I almost hit someone on a bicycle here. I was turning left out of the park and didn't expect to see a bicycle approaching from my right on the bike path. Saw her at the last second.  | 35.389535 | -120.860067 |
| 09/07/23 | Car  | Yes, this needs improvements but a round about would be very dangerous here. Roundabouts don't work well in high pedestrian areas. Cars are expecting traffic to keep moving, but then everything suddenly comes to a stop for a pedestrian. This would especially be dangerous here due to its proximity to the high school with lots of kids who feel entitled to step off the curb whether cars are coming or not. Accidents will increase with a round about in this location. | 35.380106 | -120.854818 |
| 09/07/23 | Car  | My husband avoids taking this southbound exit because with all the high school drivers it is very difficult to turn left here onto Hwy 41.   | 35.379949 | -120.855859 |
| 09/07/23 | Car  | The speed limit of 30 mph is too fast for all the tourists, jaywalkers, and parked cars along here.  | 35.371575 | -120.858093 |
| 09/07/23 | Bike | There needs to be greater line of sight in both directions at this bike path crossing. When a car approaches, bike riders suddenly appear from behind a lump in the dunes. Dangerous.  | 35.372678 | -120.860708 |
| 09/07/23 | Car  | This driveway is entirely too narrow. If you're turning right off Quintana (being run down by speeders from behind) and a car (or usually a huge UPS truck which is common due to the shipping business there) is coming out it's nearly a head-on collision (even if the vehicle coming out is far to the right side).  | 35.367671 | -120.842469 |
| 09/07/23 | Car  | It's dangerous to pull out of the Burger King even when turning right. People come fast from the left around a blind curve.  | 35.367964 | -120.84265  |
| 09/07/23 | Car  | Because there is no left turn lane here to turn from Quintana onto Kennedy, I always turn left earlier at what is now O'Reilly Auto Parts (labeled Dollar Tree on this map) then I drive through the Albertson's parking lot.  | 35.369517 | -120.844701 |
| 09/07/23 | Car  | Has anyone else noticed the round about floods when there is any good amount of rain?  | 35.366148 | -120.840876 |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type | Comment   | Latitude  | Longitude   |
|----------|------|---|-----------|-------------|
| 09/07/23 | Car  | Many cars have been damaged trying to turn right into the gas station (see all the gashes in the curb cut). They don't want people to turn right there but the only other way to get into that station is to go around the circle, go further west to the other gas station, make a U-turn by cutting thru the other gas station, turn right back onto MB Blvd to approach the gas station that you want far enough from the west to enter the "allowed" driveway. Just fix it so people can exit quickly & safely. | 35.366277 | -120.840943 |
| 09/07/23 | Car  | It's dangerous when you are going east on MB Blvd and need to west on Quintana. You need to cut broadside-style to the cars coming off the highway at 40 mph. Because you're coming from a part of the circle that is one lane the cars entering the circle think you're in an inside lane & will continue around the circle. At the last second they see you are actually exiting the circle and that to do so you have to cut right across their bow.   | 35.366511 | -120.840889 |
| 09/07/23 | Car  | The round about ought to be one lane here. People driving side by side suddenly have to merge into one lane just as they exit the circle. People also use the outer lane to gun it and pass the person in the inner lane.   | 35.366509 | -120.841184 |
| 09/07/23 | Car  | Living on Piney Way and driving it every day for 25+ years I can tell you this is a hazard. People on Pacific don't want to stop. Some people drive as though they assume that traffic on Piney has to stop. Part of the problem is poor line of sight from parked cars. People know they won't be able to see whether traffic on Piney Way is coming until they stick their car way out into Piney, so why stop way back where you know you can't see.   | 35.364991 | -120.845444 |
| 09/07/23 | Car  | We need to start writing way more tickets for all the cars that fail to stop at all the downtown stop signs.  | 35.365934 | -120.845388 |
| 09/07/23 | Car  | This is a blind left turning into traffic. Many near misses daily. Recommend a mirror. To see around corner. Also school busses turn left and they also have to navigate fast on coming cars  | 35.362226 | -120.824356 |
| 09/07/23 | Car  | Cars speed up out of round about and many near T bone hits as making a left turn or going straight.   | 35.36661  | -120.840356 |
| 09/07/23 | Car  | Speeding by northbound traffic on Piney Way is common. At one point, no fewer than 5 homes on Piney in the 400-500 block had "SLOW DOWN" signs in their yards. People need to be pulled over by enforcement. We live on Piney but because it lacks sidewalks and people speed we almost always walk on Shasta or Estero.  | 35.361354 | -120.845345 |
| 09/07/23 | Car  | When proceeding northbound on Main at Beach St, the STOP sign blends in the the dark orange motel signage on the opposite corner. While dining at the Hungry Fishermen, I have witnessed drivers blow the intersection as if there were no STOP sign at all.<br><br>Possibly just distracted or impaired drivers NOT familiar with the intersection or area. Who knows?<br><br>At night the STOP sign is VERY visible. Probably a non issue for most drivers during daylight hours.                                 | 35.368763 | -120.849984 |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type  | Comment   | Latitude  | Longitude   |
|----------|-------|---|-----------|-------------|
| 09/07/23 | Car   | Excessive speed in both directions, 7 days a week. Welcome to the Morro Bay Speedway on Ironwood Ave between Paula St. and Avalon. Excessive speeds, careless drivers, impatient drivers PASSING other vehicles. The residents/neighbors on Ironwood have seen it all. Three collisions at Ironwood and Paula, three parked cars rear ended. Data too old to be reflected in the record. Excessive speeds continue every day. What are the options to fix the decades old problem/issue ?   | 35.387808 | -120.853021 |
| 09/07/23 | Car   | Excessive speed.  | 35.388227 | -120.853263 |
| 09/08/23 | Car   | I totally agree with STOP signs at Elena and Greenwood.   | 35.391265 | -120.855884 |
| 09/08/23 | Car   | A two way STOP at Ironwood and Paula St for vehicles proceeding NB or SB on Ironwood MIGHT be helpful to get the aggressive and excessive speeds to an acceptable level for a residential neighborhood that has small children, pets and seniors, like many and most neighborhoods in MB. Unfortunately Ironwood Ave is a thoroughfare between Hwy 41/San Jacinto/Del Mar Park that FEEDS EVERY street North, East, South and West.   | 35.388875 | -120.853504 |
| 09/08/23 | Walk  | Driving north on Main St , if cars are parked out front of Tacos De Mexico , it's hard to see pedestrians crossing towards liquor store . Cross walk light ? Or restrict parking at corner of Main St n Dune .  | 35.367712 | -120.849937 |
| 09/08/23 | Bike  | We ride our bikes from North Morro Bay to Embarcadero often . The bike lane on freeway side is too small and dangerous . We always ride our bikes on the opposite side facing traffic because it feels so much safer .  | 35.384337 | -120.856768 |
| 09/08/23 | Bike  | Safer bike lane , on Freeway side , in North Morro Bay . Needs Attention .  | 35.384337 | -120.856768 |
| 09/08/23 | Bike  | Not clear the Cloister paths are MIXED use. Pedestrians resent bike here thinking they don't belong. Need better markings on pavement or signs showing mixed use, (Are there "Sharrows" for bike + pedestrians? If not there should be)   | 35.388376 | -120.861132 |
| 09/08/23 | Car   | Consider closing off Alder from crossing San Jacinto. HWY 1 Main street and San Jacinto are already too many points for conflict. Traffic entering to/from Alder just add unnecessary traffic blocking and conflict.  | 35.393704 | -120.859721 |
| 09/08/23 | Car   | Put back barrier so cars turning out of shell station can ONLY turn right. Cars turning left out of the station or cars wanting to turn into the station all too often block traffic flow at the round about and on Quintana.   | 35.366553 | -120.841316 |
| 09/08/23 | Bike  | The underpass is too narrow for bikes and pedestrians. Also, potholes are very dangerous here they are hard to see in the shadows of this narrow space.   | 35.373377 | -120.851417 |
| 09/08/23 | Bike  | As part of Power Plant property plan if not sooner there should be a path for pedestrians and bike to cross between the Embarcadero and Main street.  | 35.371255 | -120.854845 |
| 09/08/23 | Bike  | add more bike racks at abandon parking area.  | 35.366874 | -120.86699  |
| 09/08/23 | Walk  | Formalize a walking/biking path between Cloisters and HWY 41  | 35.381834 | -120.862184 |
| 09/08/23 | Other | 1) I would like to see "raised cross walks" as a traffic calming method as opposed to rumble strips (too noisy) or speed bumps (too jarring) to protect pedestrians and bikes. (Amsterdam uses this method)<br>2) More pavement markings. Drivers can't absorb info from too many signs all at once.<br>3) I would like to have a continuous, safe bike route loop thru MB that is clearly marked so everyone knows to watch for bikes when backing out of driveways, crossing streets etc. | 35.373637 | -120.840812 |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type | Comment   | Latitude  | Longitude   |
|----------|------|---|-----------|-------------|
| 09/08/23 | Car  | Build the Round-about ASAP! It is long overdue.   | 35.379995 | -120.854985 |
| 09/08/23 | Car  | Round-abouts are gaining popularity in the US for good reason. They reduce accidents and when there are accidents they tend to be less severe. Moving cross walks away from the roadway will be safer for everyone. Slower speeds thru the round about will be safer for everyone.<br><br>If we feel we need more protection for the high school kids, the campus should be closed during school hours. (with the new cafeteria no need to leave during lunch) Use crossing guards if needed. | 35.380106 | -120.854818 |
| 09/08/23 | Car  | Very steep, pot hole ridden stretch of road. Heavy vehicles should not be allowed here.   | 35.383198 | -120.851154 |
| 09/08/23 | Bike | Biking north on HWY 1 has improved since new bridges were open but really need to build the MB- & Cayucos connector pedestrian and bike path ASAP<br>I do not feel comfortable biking on HWY 1 so I am very limited as where to go without loading my bike in the car and driving somewhere else.   | 35.406139 | -120.870638 |
| 09/08/23 | Car  | Please ENFORCE vegetation height in the 10 ft triangles at each corner. Southwest corner on San Jacinto and Dogwood is just 1 example of ivy growing so high on a slight slope that I can not see over it sitting in the drivers seat without extending into the bike path/ east bound traffic lane on San Jacinto.   | 35.393414 | -120.85815  |
| 09/08/23 | Car  | Please ENFORCE large vehicles parking very close to corners blocking visibility at intersection. 1 example are large vans/trucks parking on both sides of Dogwood and very close to corner. This narrows street to 1 lane right at the corner and block visibility for drivers on Dogwood as well as those turning off Elena to Dogwood. The large boat/trailer parked on Elena just west of Dogwood compounds this visibility issue.   | 35.390336 | -120.857012 |
| 09/08/23 | Car  | We need a round-about at this intersection also. With HWY 1, Main street and Alder all in such short proximity it is often a mess. If they ever do build out the property in front of Del Mar on Main (10 acre high density?) and the Panorama property (another 10 acre high density?) traffic will only get worse. I believe this will become just as bad as Hwy 41/HWY1 is now as more homes are added in North MB.  | 35.393152 | -120.859737 |
| 09/08/23 | Bike | Bikes need a clear, safe path to continue on Quintana. Jogging over past the coffee shop has you riding head on into traffic. Crossing where cars do now isn't even safe for cars much less bikes. There is not a good way to get to the traffic circle or navigate vehicle entering and exiting the freeway onto MB Blvd. Need traffic calming so cars don't start speeding up to get on the freeway until they are past Quintana. perhaps narrowing lanes or pavement marking?              | 35.366321 | -120.8402   |
| 09/09/23 | Bike | Crossing So Bay Blvd can be very difficult at State Park Road. Need flashing crosswalk here?  | 35.353724 | -120.828066 |
| 09/09/23 | Bike | Bike lane is narrow. Need better tree/brush and debris maintenance. Wider lane for bikes would be a plus all the way to Los Osos.   | 35.357495 | -120.827165 |
| 09/09/23 | Bike | Need marked bike lane on this end of Quintana.  | 35.36509  | -120.831521 |
| 09/09/23 | Bike | Bike lane is narrow. Need better tree/brush and debris maintenance. Wider lane for bikes would be a plus all the way along Main street  | 35.40153  | -120.864651 |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type  | Comment  | Latitude  | Longitude   |
|----------|-------|--|-----------|-------------|
| 09/09/23 | Bike  | Unhoused living in creek blocking bike path with there bikes or trailers. They need to be allowed to keep their stuff out of the street as long as they are there.   | 35.369744 | -120.845532 |
| 09/09/23 | Bike  | Create public pedestrian/bike path between Lila Kaiser park and the embarcadero. This would reduce bikes on HWY 41 especially on busy weekends and holidays.   | 35.376533 | -120.859137 |
| 09/09/23 | Other | FUTURE MB Bike Loop???? Ex: From Rock parking lot -&gt; Embarcadero -&gt; Main and continue thru the State park. Left on So Bay Blvd to Quintana -&gt; all the way to Main Street traffic light. Right on Main, right on Avalon, left on Ironwood. Follow Ironwood thru Del Mar Park to Panorama to Yerba Buena. Cross HWY 1 to Beachcomber. BC to Sandlewood thru Cloisters Park. Take bike trail to HWY 41 to Embarcadero to Colman. Turn right and return to Rock parking. All clearly marked and Safe! | 35.372876 | -120.842164 |
| 09/09/23 | Other | Motorcycle speeding from San Jacinto and Buena Vista after stopping at traffic light   | 35.395253 | -120.861095 |
| 09/09/23 | Car   | Everyone takes this shortcut through the golf course. It's not really designed for the amount of traffic it gets. But...I'm wondering if repainting the crosswalks where the golfers go from one side to the other and adding some fairly pronounced speed bumps there might be a really good thing. Wouldn't be terribly expensive and might prevent an accident.   | 35.353371 | -120.840817 |
| 09/10/23 | Bike  | An excellent, level, and low-impact travel way for pedestrians and bicyclists to and from the Waterfront and Main Street.  | 35.371255 | -120.854845 |
| 09/10/23 | Car   | From the State Park through Downtown, there needs to be traffic control measures in place to enforce the posted speed limits.<br>Therefore, minimizing speeding, accidents, and noise in the surrounding areas around hotels, homes and businesses.  | 35.363934 | -120.849948 |
| 09/11/23 | Car   | 30 mph is often ignored by vehicle drivers, in addition to jeopardizing foot and bicycle traffic.  | 35.371575 | -120.858093 |
| 09/11/23 | Car   | Quintana rd at South Bay Blvd.<br>Poor visibility. Cars traveling at high speeds. Need road markings & signage.  | 35.36196  | -120.824125 |
| 09/11/23 | Car   | Blind spots coming off Kings Ave onto Quintana both directions with cars parked along Quintana.<br>Cars speeds need checked.<br>Reduce speed in areas of side streets that meet Quintana.  | 35.366185 | -120.837145 |
| 09/11/23 | Bike  | A lot of bikes using the Embarcadero. On-street markings with speed limits along with bike icons could help tell everyone what is expected of both car & bikes. Many times bikes are speeding, as well as cars!  | 35.364861 | -120.852895 |
| 09/11/23 | Walk  | Need some high visibility pedestrian crossing here!  | 35.370127 | -120.855611 |
| 09/11/23 | Other | STOP! NO BIKES! NO PEDS! ON ROADWAY! USE BIKE/PED PATHS!   | 35.372034 | -120.858906 |
| 09/11/23 | Other | Concerns regarding drop off and pick up during school hours. Parents roll through the stop sign dropping their children off at Del Mar School or the Preschool, which is jeopardizing children walking to school/crossing the street. Maybe, put in a 3 way stop sign.   | 35.395855 | -120.856884 |
| 09/11/23 | Other | Concerns regarding Cars speeding down Sequoia during school hours, especially during drop off and pick up times. Maybe speed bumps need to be added in front of the school, to slow the speeding vehicles.   | 35.395933 | -120.857763 |
| 09/16/23 | Car   | Roundabout (or done sort of different traffic pattern) would be much appreciated.  | 35.380119 | -120.854137 |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type  | Comment   | Latitude  | Longitude   |
|----------|-------|---|-----------|-------------|
| 09/16/23 | Bike  | Bike commuters and pedestrians need a safe and dedicated lane along South Bay Blvd between Los Osos and Quintana. Similar to Bob Jones Trail.   | 35.34352  | -120.824461 |
| 09/17/23 | Car   | It seems like stoplights would make more sense than a roundabout. Who designed this intersection? It is non-functional, and adds so much stress and time to the morning for school drop-off. Very unsafe for pedestrians as well.   | 35.379995 | -120.854985 |
| 09/19/23 | Car   | Establish "no right turn on red light" from Hwy 1 during peak times to help reduce traffic backups and increase pedestrian safety at this congested intersection.   | 35.393782 | -120.860346 |
| 09/21/23 | Car   | Constant speeding 35-50 in both directions. This is a 25mph zone. A fact that is ignored day and night, everyday.   | 35.363423 | -120.845361 |
| 09/21/23 | Other | Just curious, how does a speeding motorcycle on Highway 1 affect you negatively?  | 35.395253 | -120.861095 |
| 09/21/23 | Other | Who cares, the e-bikes using the red zone which cannot be used for car parking anyway. There are multiple public parking lots within a block of the cited spaces. Leave this small locally owned business alone.  | 35.363606 | -120.852495 |
| 09/21/23 | Car   | 4 Way Stop. Vehicles/bicycles from all 4-ways rarely make a full stop... they roll through or do not stop at all. Very dangerous practice for folks walking their dogs or people just walking.  | 35.386443 | -120.852506 |
| 09/21/23 | Car   | Excessive speed all along Ironwood Ave. from Del Mar Park to Atascadero Rd. Neighbors have had to put up their own "Slow Down" signs. This hasn't seemed to slow anyone down. Can speed bumps be put on Ironwood Ave to help folks slow down? Many children and parents travel to Del Mar Elementary School via Ironwood, Some walk, some drive, some bike, some skateboard. All vehicles must be made to slow down.  | 35.39003  | -120.853643 |
| 09/21/23 | Car   | Maybe we should also take some of this PUBLIC land and allow free camping for our homeless community. Seems like a worthwhile use of land owned by everyone.  | 35.353371 | -120.840817 |
| 09/23/23 | Car   | Turning left off this exit ramp is miserable before/after school hours due to how it abuts against another 4 way intersection immediately adjacent. Action needs to be taken sooner rather than later.  | 35.380047 | -120.855113 |
| 10/04/23 | ADA   | A level path access from Main Street to the Embarcadero for wheelchairs, along with bicycles and pedestrians.<br><br>Provide for parking near Main Street for pathway users.  | 35.371787 | -120.854008 |
| 10/08/23 | Other | Lighting at most all intersections on Morro Bay BLVD make it difficult to cross intersection safely as a pedestrian and difficult to see as a vehicle operator. This intersection is also dangerous as a result of no dedicated sidewalk whereby pedestrians are forced into the lane of traffic due to vehicles parking up to the building of the Dance Studio. Parked vehicles backing out from these spaces have blocked visibility to pedestrians and vehicles in the intersection. | 35.36583  | -120.845243 |
| 10/08/23 | Other | Lighting and tree canopy. Tree trimming has helped but the light does not extend out far enough to the intersection. Lighting in Morro Bay BLVD. intersections need upgrading.  | 35.365514 | -120.846434 |
| 10/08/23 | Other | Lighting at most all Morro Bay BLVD. intersections have poor lighting and or tree canopies that block what lighting is there.   | 35.365458 | -120.847507 |
| 10/09/23 | Other | Lighting on Morro Bay BLVD. intersections is poor. Cross walk striping and Stop striping at most all Morro Bay BLVD intersections are needed.   | 35.365546 | -120.848674 |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type  | Comment  | Latitude  | Longitude   |
|----------|-------|--|-----------|-------------|
| 10/09/23 | Other | Lighting and intersection striping for pedestrians and motor vehicles need improving.  | 35.365556 | -120.849811 |
| 10/09/23 | Walk  | Lack of safe crosswalk infrastructure especially for the streets feeding the Embarcadero. Poor lighting is also an issue.  | 35.364597 | -120.849755 |
| 10/09/23 | Walk  | Lack of pedestrian crosswalk infrastructure and lighting especially for streets feeding the Embarcadero.   | 35.363755 | -120.849766 |
| 10/09/23 | Walk  | The walkway through this section of Main street is uneven and in need of repair or replacement. Lighting is also poor.   | 35.359039 | -120.849674 |
| 10/09/23 | Bike  | Lack of bike lane. Street is narrow and lighting is poor. Vehicle speed is also too fast.  | 35.358381 | -120.849154 |
| 10/09/23 | Bike  | Biking infrastructure and connectivity to Morro Bay State Park and the City would greatly enhance safe bicycling.  | 35.352448 | -120.843387 |
| 10/09/23 | Walk  | Partner with State Parks to improve connectivity of walking paths to and from the City and State Parks.  | 35.350154 | -120.843035 |
| 10/09/23 | Walk  | Lack of shoulder or dedicated walkway for pedestrians.   | 35.35689  | -120.841262 |
| 10/09/23 | Walk  | Though no dedicated walkways exist nor required, many intersections lack clear visibility and or are blocked by landscaping out to the street pushing pedestrians out into the street instead of having a clear safe corner to cross through Kern.   | 35.361706 | -120.841297 |
| 10/09/23 | Walk  | Navigating around this intersection whether walking, biking, or driving, due to lack of visibility as a result of bushes, shrubs, and trees, planted out to the street.  | 35.359198 | -120.844172 |
| 10/09/23 | Bike  | Blocked visibility at this intersection due to shrubs, trees, and landscaping planted out to the street.   | 35.358972 | -120.843846 |
| 10/09/23 | Walk  | Vehicle speed on Kings is always an issue. People drive too fast, vehicles are parked out to the street and no real pathways exist for pedestrians, nor is there a consideration of shared roads.  | 35.361557 | -120.836949 |
| 10/09/23 | Walk  | Blind corner with shrub and hedge out to the street blocking visibility and putting pedestrians out into the street. No clear corner to safely wait to cross Piney. The corner of Marina and Piney.  | 35.363857 | -120.845494 |
| 10/09/23 | Car   | Blind corner due to shrub planted out to the street and tall lattice blocking the corner visibility. Pulling out onto Piney is always a challenge. There is a sidewalk on both sides of the street and beyond the corner of this house but not at this corner which would greatly improve visibility and safety for pedestrians. | 35.363949 | -120.845423 |
| 10/09/23 | Walk  | Sidewalk is needed on the west side of Piney from the intersection of Morro Bay BLVD to connect with the sidewalk at the Condominiums on Piney and Pacific. Currently cars park on the apron all the way up to the building of the dance studio pushing pedestrians out onto the traffic in the street.                          | 35.365646 | -120.845249 |
| 10/09/23 | Other | Reducing the red curb for parking would only reduce visibility for safe vehicle and pedestrian crossing.   | 35.365896 | -120.845606 |
| 10/09/23 | Car   | The Cal Trans signage is excessive blocking visibility at the stop sign requiring the driver to creep forward out into the lane to see traffic,  | 35.375451 | -120.852637 |
| 10/09/23 | Car   | Install a roundabout here.   | 35.373979 | -120.851479 |
| 10/09/23 | Car   | Install a roundabout here.   | 35.375509 | -120.852458 |
| 10/09/23 | Car   | Install a roundabout that would connect HWY 1, Main street, San Jacinto.   | 35.393631 | -120.86036  |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type  | Comment  | Latitude  | Longitude   |
|----------|-------|--|-----------|-------------|
| 10/14/23 | Walk  | There have been several accidents at this intersection precisely because it is the ONLY intersection between MB Blvd and Beach St that is not a four-way stop, which interrupts a pattern meant to train unfamiliar drivers. Horns, screeches, and close calls happen all day here, but the former PW director found the number of accidents to be acceptable for reasons unknown. Please consider installing a 4-way stop for the sake of cars, bikes, and pedestrians. I've yet to hear anyone oppose the idea.  | 35.367712 | -120.849937 |
| 10/17/23 | Car   | This intersection, including the Highway 1 on and off ramps both north and south, needs a complete overhaul. The high school traffic is wild and needs to be better controlled. Of course, the ideal would be more students taking the bus and more carpools, but it's an awkward intersection even during lower traffic times.  | 35.38011  | -120.855467 |
| 10/26/23 | Other | Car parking near corner block view of drivers turning off of Pico Street on to Main Street.  | 35.388362 | -120.858163 |
| 10/26/23 | Car   | Daily traffic well exceeds the 25mph limit. Traffic analysis conducted April 2022 documented more than half of cars exceeded the limit on a daily basis. Baywood and Paso have installed speed bumps to slow people down but MB hasn't done anything proactive. Multiple comments by Kern Ave neighbors through social media has made no progress.   | 35.363103 | -120.84152  |
| 11/01/23 | Other | Parking on Beachcomber, especially between Java and Yerba Buena, should only be allowed on the west (ocean side) of the street. It is much too narrow with parking on both sides of the street with the increase of both car and bike traffic. It is dangerously narrow for 2 cars to try to pass one another with parked cars on both sides. Add in all of the people/families trying to walk in the street while cars and electric bikes are flying through that area is an accident waiting to happen !         | 35.399713 | -120.865998 |
| 11/05/23 | Car   | 5 vehicle crashes between 2015-2020 per MBPD at Dunes/Main. Former PW director found this to be acceptable, but members of Council and PWAB disagreed. All of these crashes may have been prevented if the 2-way stop became a 4-way. Visibility is low at this hill, and pedestrians typically have to run across Main Street out of fear, even with a crosswalk. This is also the ONLY intersection in our downtown corridor (out of 7 or more) that does NOT have a stop sign. It's inconsistent and confusing. | 35.367758 | -120.849963 |
| 11/05/23 | Walk  | Every intersection within the downtown corridor on MB Blvd (Shasta to Main) and Main Street (MB Blvd to Beach) has a 4-way stop sign EXCEPT this one. Pedestrian and driver confusion cause actual crashes and constant fear and close calls. Please add stop signs on Main Street in both directions to be consistent and safe. Please fix what the former PW director didn't consider to be a problem but many others did.   | 35.367712 | -120.849937 |
| 11/06/23 | Car   | To enhance the roundabout's safety, consider clearer signage, raised pedestrian crosswalks, and central island modifications for better visibility. Implement traffic calming measures, improved lighting, advanced warning systems, and one-way circulation. Add pedestrian refuge islands and review speed limits while enforcing strict adherence. Include dedicated bicycle lanes and ensure ADA compliance for a safer and more efficient roundabout.   | 35.366393 | -120.841005 |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type  | Comment  | Latitude  | Longitude   |
|----------|-------|--|-----------|-------------|
| 11/07/23 | Car   | Improving a busy tourist-driven 4-way stop with two main routes can be challenging, but there are strategies to consider. Install traffic signals, use advanced warning signs, and mark lanes clearly. Widen lanes for smoother traffic and ensure safe pedestrian crossings. Enforce traffic rules, synchronize signal timing, and use dynamic signage for real-time info. Add bike lanes and encourage drivers to explore alternative routes during peak times for better traffic flow and safety. | 35.368677 | -120.850028 |
| 11/08/23 | Car   | To enhance safety and ease tourist traffic at a busy 4-way stop near steep terrain with multiple parking lots, we need a mix of traffic measures. Installing signals and dedicated turning lanes can help, as well as adjusting the steep grade. Clear signage and crosswalks are crucial. Additionally, improving pedestrian infrastructure is a must. For better traffic flow, consider relocating parking entrances and exits away from the intersection.   | 35.368747 | -120.854089 |
| 11/08/23 | Walk  | Improving pedestrian safety on Morro Bay Blvd. west of the roundabout is vital for residents and tourists. Key solutions include lowering speed limits, enhancing crosswalks, installing pedestrian islands, signals, and speed-reduction measures, along with increased police enforcement. Sidewalk expansion and traffic calming measures should also be considered to create a safer environment for pedestrians.  | 35.365921 | -120.843387 |
| 11/08/23 | Car   | inefficient and midly dangerous intersection.<br>1. cars turning from hwy don't have stop sign<br>2. cars getting from main st to hwy 1 often stuck on stop sign and block others behind them (who just want to proceed straight)  | 35.393659 | -120.860102 |
| 11/10/23 | Other | Landscaping needs attention at Avalon and Main St. No line of sight looking northbound on Main St. when stopping at the limit line. Difficult to see bicyclists, pedestrians and southbound vehicles.  | 35.384764 | -120.856862 |
| 11/10/23 | Walk  | This is a poorly lit cross walk and it can be difficult to see pedestrians crossing at night. Especially when traveling westbound on Atascadero Rd. and turning left onto the on-ramp it is difficult to see pedestrians because of how dark it is.  | 35.379926 | -120.85588  |
| 11/10/23 | Car   | Autos exhibit dangerous speeds well over the speed limit in this area. There are many people out walking on this street, many with children and pets. This is one of the few "through streets" in the area and therefore receives much more traffic from people who use this street to access Hwy 41. The traffic is particularly bad between 7:30 and 9:00 AM when people are "off to work".<br>Traffic calming (speed bumps like those on Santa Ysabel in Los Osos) would be VERY beneficial.      | 35.387884 | -120.853128 |
| 11/10/23 | Walk  | Walking to downtown from the harbor track neighborhood is stressful and scary. The side wall is small, the crosswalk at the exit is wide, and the crosswalk to the bike trail/path is inaccessible.  | 35.373511 | -120.851431 |
| 11/11/23 | Car   | I live at Silver City for over 5 years and multiple times a week cars run the stop signs coming from the beach headed east up the 41 and west towards the beach. Many times the Main street north to south traffic will do the same when the intersection is busy. I have witnessed and was myself in 3 near misses since October 2023. I have left a message on 11/10/23 with Bonnie Johnson @ MBPD regarding my concern for at least Police presence during 8-9:30 am and 2:30-4:00pm.             | 35.380197 | -120.854821 |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type  | Comment   | Latitude  | Longitude   |
|----------|-------|---|-----------|-------------|
| 11/11/23 | Walk  | I agree one thousand per cent. Several great businesses located nearby. Local drivers KNOW to beware of this crossing. Visitors navigating by phone, texting/distracted or impaired drivers make crossing every intersection in MB interesting. MORE STOP SIGNS and/or traffic enforcement per CVC.   | 35.367712 | -120.849937 |
| 11/11/23 | Bike  | The bike/pedestrian path has STOP signs at this location, MANY times ignored by bike, E bike and E skateboarders, etc.<br><br>MOST local drivers know and respect this crossing.<br><br>One wheeled skateboarders/show offs along the Waterfront and Embarcadero in traffic are another accident waiting to happen. Pedestrian walkways between eateries, gift shops, etc, should be off limits to E Skateboarders with excess speed. | 35.372678 | -120.860708 |
| 11/11/23 | Car   | Excessive speed from vehicles coming off Hwy 41. A lack of speed limit signage the length of Ironwood to Del Mar Park. Speed signs with indicator would be helpful. BOTH directions. Many dog walkers.  | 35.384869 | -120.851991 |
| 11/15/23 | Car   | People never stop at this intersection, all day they just fly through it  | 35.360285 | -120.841336 |
| 11/18/23 | Car   | Vegetation impacts line of sight for motorists turning left from Shasta onto Main Street  | 35.355841 | -120.846176 |
| 11/18/23 | Car   | Vegetation impacts line of site for motorists traveling north and southbound on Shasta at Anchor.   | 35.362089 | -120.846487 |
| 11/18/23 | Car   | Drainage swale crossing Piney also slows down motorists which is great. Instead of speed bumps, perhaps this type of device could be deployed in other areas of town to address both issues.  | 35.364836 | -120.845371 |
| 11/18/23 | Other | As part of the education component, please get the word out on how to use a roundabout. People might not hate them so much if they knew how to use them.  | 35.366332 | -120.841016 |
| 11/18/23 | Walk  | Pedestrians wishing to cross Embarcadero at most intersections are difficult to see when cars are parked on the street. Rather than reduce on-street parking, consider other options such as painted bulbous.   | 35.366691 | -120.853364 |
| 11/18/23 | Other | At the second workshop, it was noted that vegetation in the right of way made it difficult for pedestrians. Unfortunately removing this vegetation may cause motorists to drive even faster so the City should look at this issue very carefully before acting. If vegetation does need to be removed, property owner should be contacted so they can implement.  | 35.36187  | -120.841488 |
| 11/18/23 | Walk  | Could painted bulbous make it easier for pedestrians to be seen before crossing Main at Pacific? I am all for low cost solutions.   | 35.364932 | -120.851058 |
| 11/18/23 | Walk  | If this intersection remains as a two way stop, consider adding pedestrian activated flashing lights so motorists will be more likely to stop for pedestrians.  | 35.367712 | -120.849937 |
| 11/18/23 | Car   | Is there enough room to have a dedicated NB through lane as well as a dedicated NB left turn lane on Main?  | 35.368763 | -120.849984 |
| 11/18/23 | Walk  | As a first start, use reflective paint that doesn't wear down so quickly.   | 35.365921 | -120.843387 |
| 11/18/23 | Walk  | There is a lot going on at this location. Perhaps through striping the vehicle travel lanes could be narrowed slowing down motorists and making pedestrians more visible.   | 35.365969 | -120.842454 |

## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type  | Comment  | Latitude  | Longitude   |
|----------|-------|--|-----------|-------------|
| 11/18/23 | Walk  | It is also difficult in the late afternoon (when school lets out) during the time of year when the sun is shining directly in front of you as you come out from under the Hwy 1 overpass.  | 35.379926 | -120.85588  |
| 11/18/23 | Car   | Education for all users regarding how to use a roundabout is definitely needed. Interim pedestrian safety improvements are needed now. If consultants haven't visited the site, they should do so during peak pedestrian times which I think are lunchtime and when school lets out.   | 35.379995 | -120.854985 |
| 11/18/23 | Walk  | Review the City's Bicycle and Pedestrian Plan for recommended safety improvements.   | 35.393773 | -120.860134 |
| 11/18/23 | Walk  | Review the City's Bicycle and Pedestrian Plan for recommended safety improvements for crossing Hwy 1 at this location.   | 35.404303 | -120.867559 |
| 11/18/23 | Walk  | High pedestrian volumes make walking this block difficult. Possible solutions include widening the sidewalk on the west side or installing a new sidewalk on the east side but not by removing on-street parking. If that is the only option, I would instead improve signage directing pedestrians to the pedestrian easement on the harbor side of the business. | 35.368204 | -120.853804 |
| 11/18/23 | Walk  | I miss the stairs that used to provide a connection between the Embarcadero and the Vet's Hall. My guess is that reinstalling them would require very costly ADA upgrades. If that is not the case and the Vet's Hall will contain to be used long term for public meetings, please consider applying for a grant to restore this access.                          | 35.370129 | -120.854115 |
| 11/18/23 | Walk  | The stair access is heavily used and hopefully will be maintained so it can stay in use unlike the Surf Street stairs.   | 35.359954 | -120.851144 |
| 11/18/23 | Walk  | Motorists don't stop for pedestrians at this crosswalk. Perhaps some low cost modifications can be implemented to improve compliance.  | 35.35991  | -120.851283 |
| 11/18/23 | Bike  | Rather than have City crews address, please consider contacting property owner to reduce City effort and empower property owner. Fire Department hacked away my plantings near a fire hydrant. I contacted the Fire Department and have taken over the responsibility of maintaining the required clearance.   | 35.358972 | -120.843846 |
| 11/18/23 | Walk  | This intersection, along with Ridgeway and Fresno are very large due to the angled cross streets. Could striping be used to narrow the roadways and provide wide shoulders? Taking out vegetation may increase vehicle speeds which we don't want.   | 35.359198 | -120.844172 |
| 11/18/23 | Walk  | Wide intersection makes it difficult for pedestrians to cross Main. Could painted bulbous help direct vehicles and reduce the crossing distance for pedestrians?   | 35.355815 | -120.844556 |
| 11/18/23 | Walk  | Ask HOA to maintain a vertical clearance under street trees on for pedestrians using sidewalk. This is especially important since there is not sidewalk on the other side of the street.   | 35.355867 | -120.845034 |
| 11/18/23 | Other | Could traffic safety be improved with the installation of a Caltrans roundabout? If so, pass recommendations on to Caltrans. It would certainly help air quality by reducing all the starts and stops.   | 35.404128 | -120.867773 |
| 11/18/23 | Other | Would traffic safety be improved by the installation of a Caltrans roundabout?   | 35.393554 | -120.860467 |
| 11/18/23 | Bike  | Could a sign notifying motorists of the two way bike path help this issue?   | 35.389535 | -120.860067 |
| 11/22/23 | Car   | An Enter One Way here from Embarcadero. The current Exit Stop onto Embarcadero is awkward. Eliminate EXIT and reroute by one way entry to exit out of parking lot by GAFCO.  | 35.368695 | -120.854285 |

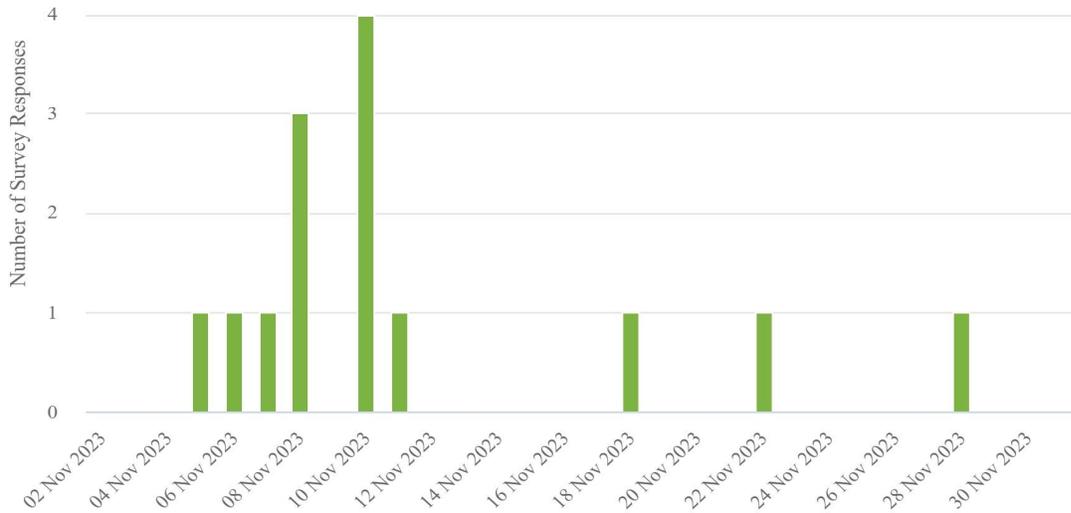
## Morro Bay Local Roadway Safety Plan - Interactive Map Comments

| Date     | Type       | Comment  | Latitude  | Longitude   |
|----------|------------|--|-----------|-------------|
| 11/27/23 | Car        | Please consider planting street trees for their traffic calming effect.  | 35.360881 | -120.849996 |
| 11/27/23 | Car        | The planting of street trees could help slow down vehicle traffic.   | 35.363103 | -120.84152  |
| 11/27/23 | Car        | Could the City plant some street trees on Piney to slow vehicle traffic?   | 35.361723 | -120.845344 |
| 11/28/23 | Bike       | Yes this is a DANGEROUS part of Morro Bay for cyclists. There are 3 blind areas on this stretch of main street, and no room for bikers on either side or direction. I have almost been hit several times by cars speeding through this road. Morro Bay in general is deficient on bike lane markings in general. There are some, but they are inconsistent and poorly marked. This road is the worst of all. Come on Morro Bay, there are so many cyclists here! | 35.358381 | -120.849154 |
| 11/28/23 | Bike       | There is absolutely no room or lanes for cyclists in this area of Morro Bay. It is dangerous to ride here yet so many try. This needs a bike lane.   | 35.352448 | -120.843387 |
| 11/28/23 | Pedestrian | There is no walking path, sidewalk or bike lane here yet many like to walk up this road to the black hill trail. Motorists tend to speed on this road making it dangerous to walk or ride on.  | 35.35082  | -120.835    |
| 12/01/23 | Car        | Line of sight is restricted by vegetation growing on the south side of State Park Road making it difficult for drivers to see oncoming traffic before turning left onto South Bay Blvd.  | 35.35492  | -120.828    |
| 12/01/23 | Car        | Traffic calming. Could the addition of edge line striping that result in narrower but legal travel lanes slow down motorists? I am all for low cost solutions if they work. The mobile speed feedback trailer seems to have an effect when it is deployed.   | 35.36008  | -120.851    |
| 12/01/23 | Car        | Instead of speed bumps or street trees, could edge line striping help? Have any studies shown that if the travel lane narrower than the paved surface, motorists slow down?  | 35.363103 | -120.84152  |
| 12/01/23 | Car        | Instead of street trees, could restriping the roadway to provide 2 travel lanes at the minimum required and wider parking lanes ? Currently south of Pacific the roadway is extra wide.  | 35.361723 | -120.845344 |

# Morro Bay Local Roadway Safety Plan - Survey Results

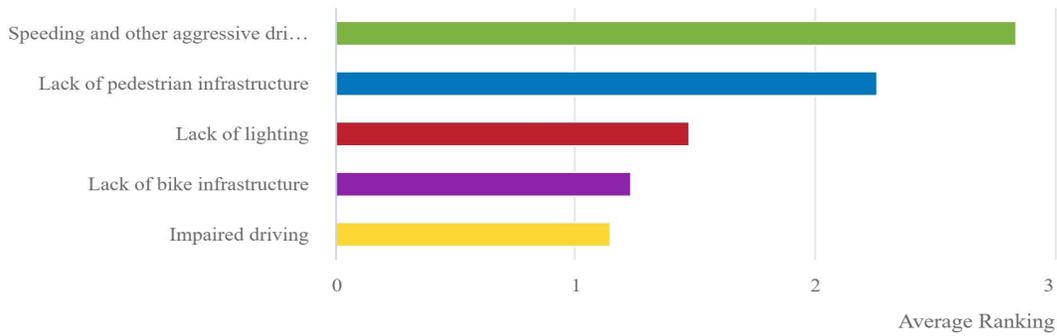
## Number of Survey Responses by Day

69 responses



## Q1. How would you rank the following areas in order of importance?

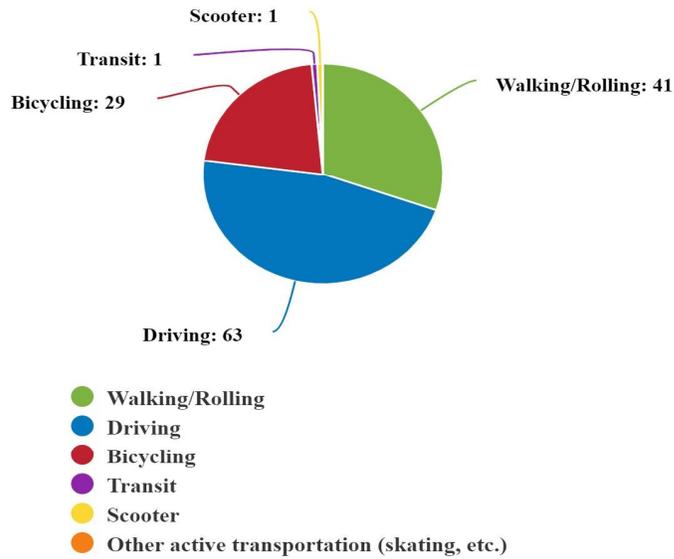
65 answers



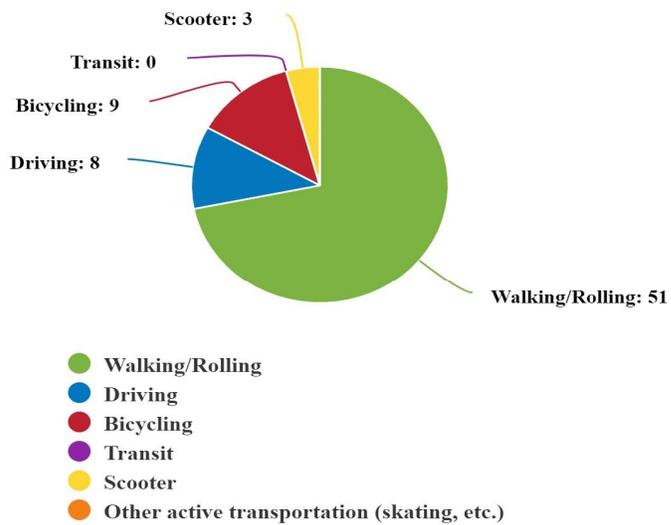
- Speeding and other aggressive driving behaviors
- Lack of pedestrian infrastructure
- Lack of lighting
- Lack of bike infrastructure
- Impaired driving

Morro Bay Local Roadway Safety Plan - Survey Results

Q2. How do you most often travel through Morro Bay?

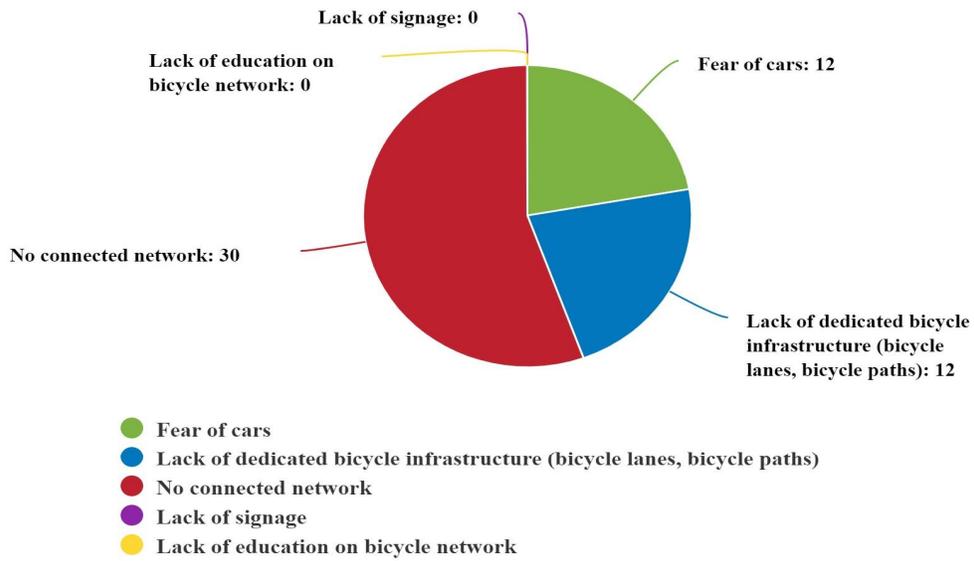


Q3. Other than driving, how would you prefer to travel for trips less than a mile?

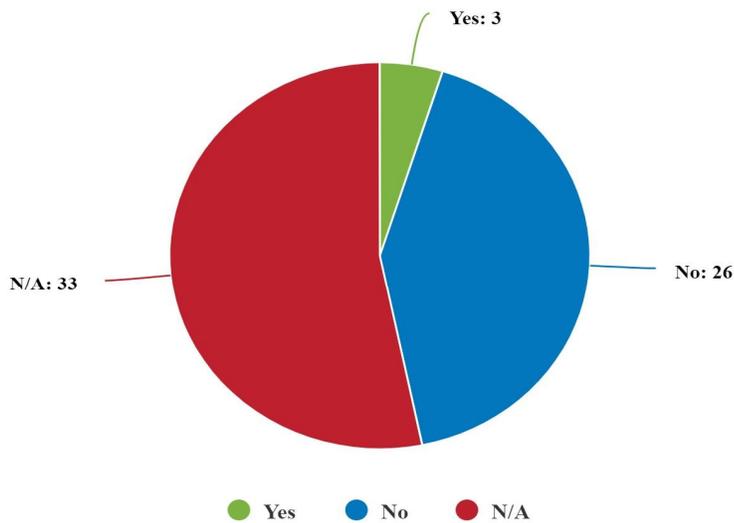


Morro Bay Local Roadway Safety Plan - Survey Results

Q4. What is the biggest factor preventing you from biking more?

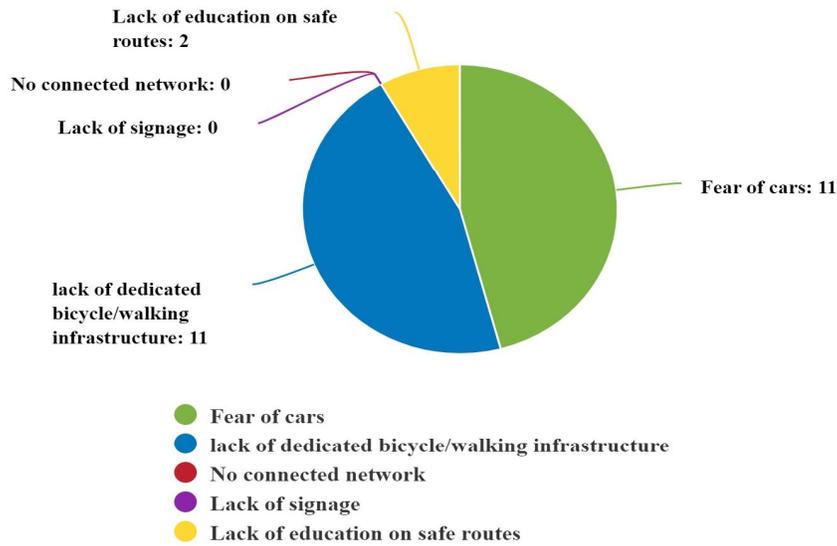


Q5. Would you feel comfortable allowing your child to walk or bike independently?

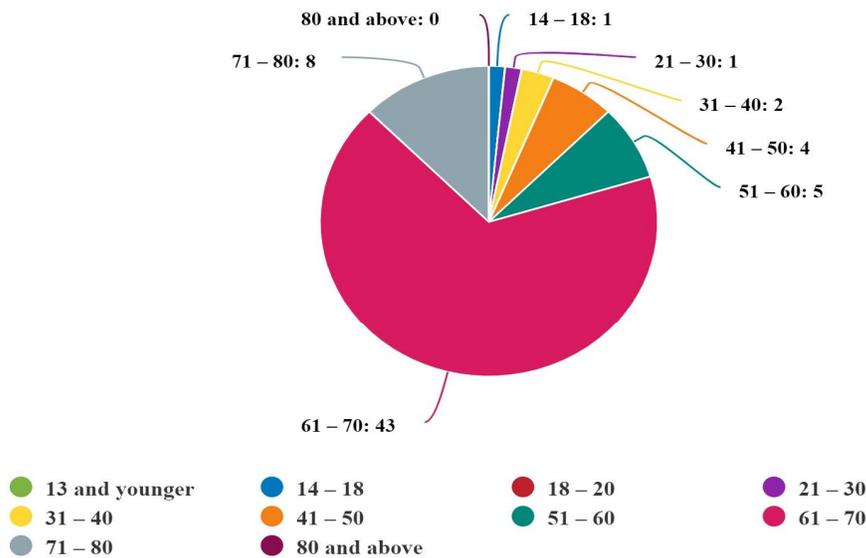


Morro Bay Local Roadway Safety Plan - Survey Results

Q6. Why not?



Q7. What is your age?



Morro Bay Local Roadway Safety Plan - Survey Results

Q8. What is the closest intersection to your home?



## Morro Bay Local Roadway Safety Plan - Email Comments

| Date     | Name            | Comment   |
|----------|-----------------|---|
| 01/19/24 | Jeff Heller     | Increase bike safety by installing "Share the Road" signs and "sharrows" . The busiest street with bikers are : Main Street from the State Park all the way to the north end of town and Embarcadero Road from the launch ramp out to the Rock Parking Lot.   |
| 01/17/24 | Betty Winholtz  | <p>0. Page 1. Please justify this figure with documentation: "Morro Bay's economic losses due to traffic injuries amounted to approximately \$53 million from 2013 to 2022."</p> <p>1. Page 12. Attendance at the first public workshop was accurately given, but attendance at the second and third meetings were omitted; because there were only 8 people in the audience?</p> <p>2. Page 16. City Park bus stop is not a hub. A transit hub "offers access to multiple modes of public transit at a single location." The only transportation mode at City Park is bus.</p> <p>3. Page 17. Future projects are listed. Where are these projects: "CDBG Sidewalk Gap Closures" and "Striping Improvements Citywide"? What is a "bike box"? Who proposed this: "ADA compliant ramp up bluff from Embarcadero to Olive Street"? To cut into this bluff is expensive and ludicrous; what is the purpose when Marina Street is the least steep and accessible between the Embarcadero and the top of the bluff? This item use to be in both the City's and State Park's general plans: "Ped path along Lower State Park Road." State Parks has resisted.</p> <p>4. Page 23. With single digit crashes over a 10-year period, it is misleading to use percentages.</p> <p>5. Page 26. If pedestrians are not clever now, what will they be in a roundabout at Hwy 41/Main?</p> <p>6. Page 28. Comparing Morro Bay single digit crashes to Statewide in the thousands crashes in percentage is quite misleading.</p> <p>7. Page 36. "Does the City have an Active Transportation Coordinator?" Nor do we need one. The City is not structurally built for this: "Does the City have a Complete Streets Plan".</p> <p>8. Page 37. I thought we did have one or pieces of one: "Does the City have a Safe Routes to School program". Is this the Circulation Element in our General Plan: "Does the City have an Active Transportation"? What is this: "Does the City have CAMUTCD-compliant Pedestrian Signal Timing?"</p> <p>9. Page 38. Does this mean initiate only or also maintain, i.e. restripe every year: "Does the City implement Crosswalks at high pedestrian locations?" Under "What types of transit does the City have?" how is it stated we have taxi service?</p> <p>10. On Morro Bay Blvd: "Curb Extensions (Bulb-Outs) at intersections." Absolutely not. Not here not anywhere. Why all the attention to Morro Bay Blvd?</p> <p>11. Page 52. At Main and Radcliffe why not start with a 4-way stop instead of "Signal warrant analysis"? Why close off Alder in San Jacinto? Are you suggesting a double signal at Yerba Buena/Main right next to Hwy 1/Yerba Buena current signal: "install traffic signal (review warrants)? Why install a "mini-roundabout" at Main/Yerba Buena, right next to Hwy 1?!</p> <p>12. Page 54. There is no room to do this: "Realign intersection to reduce speeding</p> |
| 01/05/24 | Jenny "B" Jones | 2 stop signs on Allesandro Street, where it intersects with Kings Street. The proposed signs would alert traffic to fully stop before inadvertently crossing into the busy Kings intersection from both directions.   |

## Morro Bay Local Roadway Safety Plan - Email Comments

| Date     | Name          | Comment  |
|----------|---------------|--|
| 01/12/24 | Joel Stein    | <p>We are in desperate need of traffic circles at both highway 41 and at San Jacinto. Those intersections are ridiculous. An eight way stop at 41 and a 10 way stop, sort of, at San Jacinto. Insane.</p>  |
| 01/13/24 | Lynda Merrill | <p>I have tried to read this report but found it overwhelming. I trust you all have read it and will voice your opinion (I watch all the City Meetings) so I will tune in.</p> <p>I avoid Main/41, but know there are serious problems, especially during High school start/ending times.</p> <p>I have volunteered picking up trash at the Embarcadero/Rock area and have been concerned about the backup of cars on Holidays and weekends. I'm sure our Police Chief is considering controls/ diverting traffic, etc. I'm sure this is discussed.</p> <p>I live on Sequoia Street and support any improvements that will help protect the children going to and from Del Mar School. The red curb seems reasonable. The major problem we have on this street is speeding parents taking their children to and from school, strangely, You'd think they would understand the safety of walking children! I have difficulty exiting my driveway at school start/ending times. Also, we have vehicles parking near the intersections forcing children out into the street (walking to and from school). No sidewalks except in front of the school, our property and North West Sequoia to Main. Since Morro Elementary closed years ago we have had all the parents driving from all over City coming down Sequoia and surrounding areas.</p> <p>The intersection at Main and San Jacinto is a nightmare at peak hours. People are in a big hurry to get where they are going. I often have trouble exiting Sequoia onto Main Street. There are no sidewalks to speak of so people walk where they can. Sorry, if there was a discussion of Main/San Jacinto I couldn't find it. I know it has to do with the State Highway One/City streets, etc.? Thanks to PW for the repaving job it has been helpful. If there is a long range plan for this intersection I would be interested in seeing it. The cyclone fence is ugly, as always, I've attempted to encourage a better looking fence, with no luck. It is an embarrassing feature of our City.</p> <p>Years ago, when I was helping clean up litter at the Embarcadero I noticed the cross walks were old and invisible. I and others asked (begged) to have them repainted. I think they were finally repainted? Of course, this is dangerous for pedestrians.</p> <p>Speeding, impaired drivers, I read in the report, is always a factor when discussing safety. I was surprised to see the data regarding seniors and accidents. Is that because we have more seniors? Never able to read those graphs.</p> |

## Morro Bay Local Roadway Safety Plan - Email Comments

| Date     | Name       | Comment   |
|----------|------------|---|
| 01/17/24 | Sean Green | <p>I want to also thank your research team for the attention paid to the Main/Dunes intersection where five recent crashes have occurred. Given the three options presented objectively, it seems crystal clear that \$12,400 in 20-year estimated costs for a 4-way stop installation in order to gain a 50% crash reduction delivers a low cost, high return solution that Council can get behind. And lastly, although more of a pedestrian issue than road/vehicle, I'm disappointed that the Surf Street Stairs pedestrian access route from Surf Street/Veteran's Hall to the Triangle Lot and Embarcadero below earns no mention in the draft LRSP. Not only does the temporarily closed throughway at the west end of Surf provide required coastal access from additional blufftop parking to Embarcadero, but those stairs, for decades, also offered safe passage for longtime residents and senior citizens of the Beach Street District who couldn't (and still can't) manage the steep slope of nearby Beach Street, a street that has seen several vehicular accidents in recent years, one of them fatal. Crashes aside, it's an absolute shame on a personal level to see my older neighbors literally selling their houses and moving away in the months and years since the catastrophic, misguided closure of this staircase under the management of former regimes. As I've said to PWAB members and Mr. Kwolek, the City's failure at Surf Street predates current decision-makers; all we can do is look forward. Perhaps by adding mentions of this important access point to the LRSP, wherever appropriate, including historical, functional, and legal language surrounding its decades-long existence, temporary closure, and impact on parking and vehicular traffic, Public Works can begin to right a wrong sometime in the not-so-distant future.</p> |

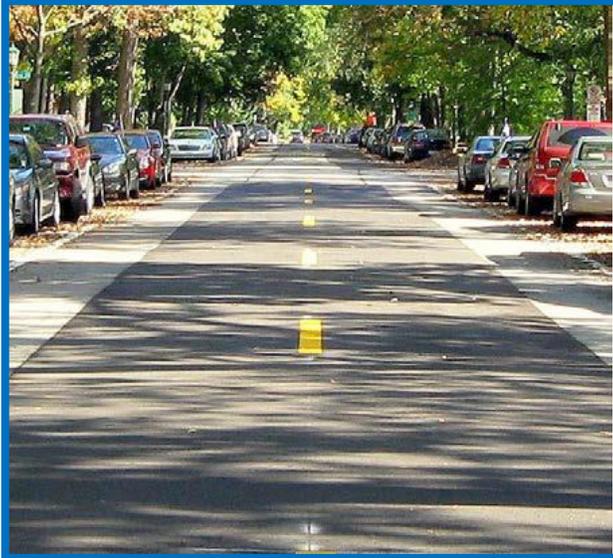


## Appendix B – Traffic Calming Implementation Examples

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## STRIPING



### Description:

Roadway striping can be used as a traffic calming measure to narrow travel lane widths and create roadways that more effectively delineate space for various uses. Striping can be used to delineate centerlines, edge lines, parking lanes, bicycle lanes, and medians where previous striping is not present or where the street can be restriped to create a new roadway configuration

**Tier:** Tier 1

**Cost:** \$

### Advantages:

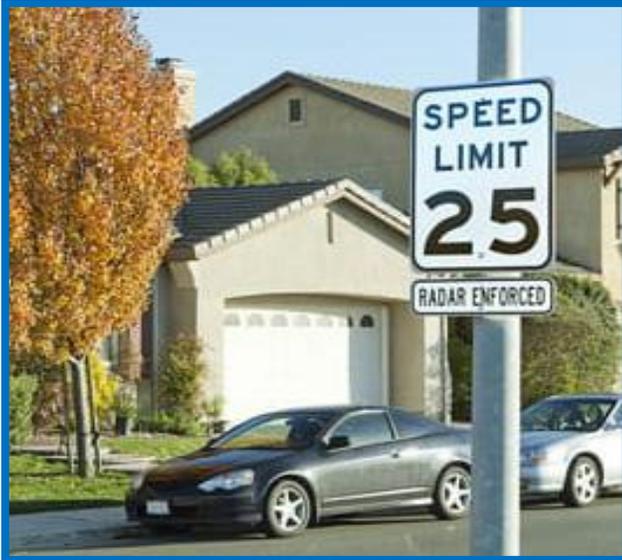
- Can be used to improve access and comfort for vulnerable road users
- Does not slow emergency vehicles
- Low cost; quick and easy to implement

### Disadvantages:

- Requires regular maintenance - consider use of materials with higher retroreflectivity and durability ratings to reduce maintenance costs
- Less effective in reducing speed than other tools



## SPEED SIGNAGE



### Description:

In a traffic calming context, signage is typically used to remind drivers of roadway speed limits, critical safety considerations, and the rules of the road. Used in a clear and consistent manner, signage can help support traffic safety educational and enforcement efforts undertaken by the City.

**Tier:** Tier 1

**Cost:** \$

### Advantages:

- Speed feedback signs have demonstrated effectiveness in speed reduction
- Supports education and enforcement efforts
- Does not slow emergency vehicles
- Low cost; quick and easy to implement

### Disadvantages:

- Signage alone does not guarantee responsible driver behavior
- Drivers may become desensitized over time, reducing long-term effectiveness
- Speed reporting can be replaced by instructions to slow down in cases of excessive speed
- May be subject to vandalism or theft



## SPEED LEGENDS



### Description:

Speed legends are a series of painted numerals on the roadway that indicate the legal speed limit in miles per hour to catch driver attention, influencing them to reduce vehicle speed and exercise caution. Typically placed near posted speed limit signs, they are useful in reinforcing speed limits where roadway conditions, such as functional class or adjacent land uses, change.

**Tier:** Tier 1

**Cost:** \$

### Advantages:

- Does not affect emergency vehicles
- Low cost; quick and easy to implement

### Disadvantages:

- Requires regular maintenance - consider use of materials with higher retroreflectivity and durability ratings to reduce maintenance costs
- Less effective in reducing speed than other tools



## HIGH VISIBILITY CROSSWALKS



### Description:

High-Visibility Crosswalks use bold striping patterns to help improve driver awareness and increase visibility of a pedestrian crossing.

**Tier:** Tier 1

**Cost:** \$

### Advantages:

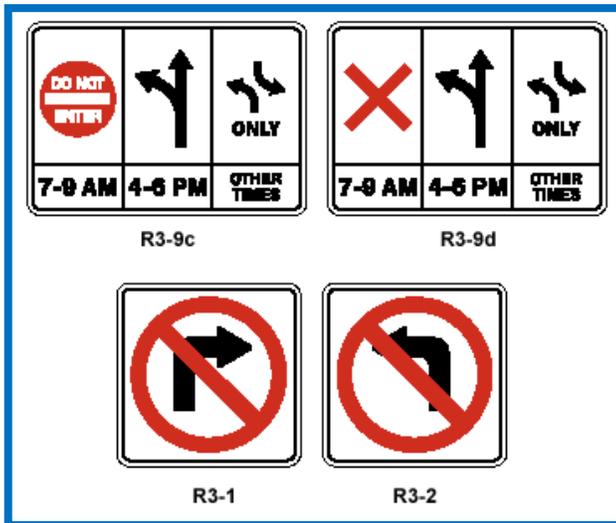
- Increases driver awareness of the pedestrian crossing
- Reduces pedestrian crossings at unmarked locations

### Disadvantages:

- High-visibility crosswalks require regular maintenance - consider use of materials with higher retroreflectivity and durability ratings to reduce maintenance costs
- Less effective in reducing speed than other tools



## SIGNED TURN RESTRICTIONS



### Description:

Signed turn restrictions warn drivers that access to certain streets is prohibited for non-locals without designing and installing costly infrastructure.

Tier: Tier 1

Cost: \$

### Advantages:

- Effective in addressing time-of-day cut-through traffic problems
- Signs are relatively easy and low cost to install
- Movement restrictions do not slow or divert emergency vehicles

### Disadvantages:

- Compliance can be low without enforcement
- May increase trip length or other access concerns
- May affect adjacent traffic patterns
- Signs require regular maintenance

## CURB EXTENSIONS (BULB OUTS)



### Description:

Curb Extensions, often called bulb outs when used at intersections, create additional sidewalk space for pedestrians while influencing drivers to reduce their speeds via reductions in lane width and increased curb radii.

Tier: Tier 2

Cost: \$\$

### Advantages:

- Increases driver awareness of the pedestrian crossing
- Curb extensions/bulb outs have demonstrated effectiveness in reducing vehicle speeds and vehicle-pedestrian collisions
- Opportunity to increase aesthetic appeal

### Disadvantages:

- Can be costly to implement
- May interrupt bicycle facilities and/or reduce road space for bicyclists
- May reduce on-street parking
- May complicate drainage designs
- Considerations needed for emergency vehicles, buses, and trucks



## PEDESTRIAN REFUGE ISLANDS



### Description:

Pedestrian Refuge Islands provide a safe space within a roadway median for pedestrians to focus on one direction of oncoming traffic at a time and wait for a safe gap to cross the street. These improvements have demonstrated effectiveness in improving pedestrian safety and reducing vehicle speeds and collisions.

**Tier:** Tier 2

**Cost:** \$\$

### Advantages:

- Increases driver awareness of the pedestrian crossing
- Has demonstrated effectiveness in reducing vehicle speeds and vehicle-pedestrian collisions
- Opportunity to increase aesthetic appeal

### Disadvantages:

- Can be costly to implement

## ROAD DIETS/TONING



### Description:

Road diets or road toning reconfigures the roadway by reducing the number of travel lanes along roadways with more than one lane in each direction and repurposing the space through the addition of curbside parking, medians with left-turn pockets or center two-way left-turn lanes, and/or dedicated bicycle facilities. Done successfully, road diets can reduce vehicle speeds and traffic collisions by eliminating underused roadway capacity and improve safety for pedestrians and bicyclists.

**Tier:** Tier 2

**Cost:** \$\$

### Advantages:

- Demonstrated effectiveness in reducing vehicle speeds and collisions/collision severity
- May facilitate modal shift if used to install dedicated bicycle facilities
- Typically low to moderate cost to implement

### Disadvantages:

- Reduces vehicle capacity of the roadway, potentially increasing congestion
- May increase vehicle traffic and congestion on alternate parallel roadways
- Increased congestion may slow emergency vehicles and transit
- Requires lengthy study and public engagement process prior to implementation



## MINI-ROUNDAABOUT



### Description:

Mini-roundabouts (also known as neighborhood traffic circles) are smaller versions of roundabouts that can be installed at minor intersections. They lower speeds and can be installed using simple striping or raised islands. They can be applied with plantings that beautify the street and can be designed to accommodate emergency vehicles.

**Tier:** Tier 2

**Cost:** \$\$

### Advantages:

- Have been shown to lower speeds and reduce crashes
- Can beautify area with plantings and art
- Creates more visibility of the intersection for drivers

### Disadvantages:

- Not advised for higher speed corridors
- Requires design and outreach prior to implementation

## VERTICAL DEFLECTIONS (SPEED HUMPS/BUMPS, SPEED KIDNEYS, SPEED TABLES)



### Description:

Vertical deflections are a suite of tools consisting of raised features along a roadway that force vehicles to reduce speed to comfortably traverse them. The most commonly used, **speed humps** are a series of elongated mounds extending perpendicularly across the roadway width. **Speed kidneys** are a series of elongated raised features with a curvilinear shape in the direction of traffic, giving vehicles the option to either pass over them or take a curvilinear path to avoid vertical discomfort. **Speed tables** are wider, flat-topped raised features that can accommodate most vehicles' wheelbases, allowing slightly faster crossing speeds.

**Tier:** Tier 2

**Cost:** \$

### Advantages:

- Effective in reducing vehicle speeds and cut-through traffic
- May reduce traffic volumes and crash activity
- Typically low to moderate cost

### Disadvantages:

- May divert traffic onto adjacent streets
- May increase noise pollution as vehicles accelerate and decelerate
- Some implementations slow transit, emergency vehicles, and trucks
- May reduce on-street parking



## RAISED CROSSWALKS



### Description:

Raised crosswalks are similar to speed tables but situated at intersections themselves. They often be coupled with a Retroreflective Flashing Beacon (RRFB), but can also be placed at existing intersections.

**Tier:** Tier 2

**Cost:** \$\$

### Advantages:

- Effective in reducing vehicle speeds and cut-through traffic
- Effective in increasing pedestrian safety
- May reduce traffic volumes and crash activity

### Disadvantages:

- May divert traffic onto other nearby streets
- Sometimes slows transit, emergency vehicles, and trucks
- May increase noise as vehicles accelerate and decelerate

## RAISED INTERSECTIONS



### Description:

Raised intersections are similar to speed tables, but applied to an entire intersection. They are useful for slow vehicles through an intersection and raising the intersection up to sidewalk level to ease pedestrian and ADA use.

**Tier:** Tier 2

**Cost:** \$\$

### Advantages:

- Effective in reducing vehicle speeds and cut-through traffic
- Effective in increasing pedestrian safety
- May reduce traffic volumes and crash activity

### Disadvantages:

- May divert traffic onto other nearby streets
- Sometimes slows transit, emergency vehicles, and trucks
- May increase noise as vehicles accelerate and decelerate



## LATERAL SHIFTS/CHICANES/CHOKERS



### Description:

A lateral shift utilizes curb extensions to shift the roadway alignment in at least one direction. Chicanes are versions of a lateral shift, with multiple shifts in the roadway alignment forming S-shaped curves. A two-lane choker utilizes curb extensions at a mid-block location to physically narrow the roadway, while a one-lane choker does the same to reduce the roadway to one lane, forcing drivers to yield to and negotiate oncoming traffic.

**Tier:** Tier 2

**Cost:** \$\$\$

### Advantages:

- Demonstrated effectiveness in reducing speeds
- Potential to reduce traffic volumes and cut-through traffic
- Potential to improve pedestrian safety by lowering crossing distances
- Opportunity to increase aesthetic appeal

### Disadvantages:

- May divert traffic onto other nearby streets
- In absence of oncoming traffic, drivers may cross centerline to avoid reducing speed
- Considerations must be taken to accommodate bike facilities
- May slow emergency vehicles
- May complicate drainage design
- May reduce on-street parking



## FORCED TURN ISLAND (NEIGHBORHOOD ACCESS CONTROL)



### Description:

Forced turn islands are raised islands that restrict certain movements at an intersection approach, typically forcing drivers to turn. These types of applications can prevent neighborhood cut-through traffic.

**Tier:** Tier 2

**Cost:** \$\$\$

### Advantages:

- Eliminates cut-through traffic
- Reduces vehicle speeds and volumes in the immediate vicinity
- May improve intersection safety by reducing conflict points
- Reduces noise pollution in vicinity
- Opportunity to increase aesthetic appeal

### Disadvantages:

- Potential for disruption to local residents with road diversion causing increased travel time
- Traffic is diverted to adjacent streets
- Delay emergency vehicles within local neighborhoods
- Typically high costs

## DIAGONAL DIVERTER (NEIGHBORHOOD ACCESS CONTROL)



### Description:

Diagonal diverters place a raised barrier diagonally across an intersection to block through movements from each direction.

**Tier:** Tier 2

**Cost:** \$\$\$

### Advantages:

- Eliminates cut-through traffic
- Reduces vehicle speeds and volumes in the immediate vicinity
- May improve intersection safety by reducing conflict points
- Reduces noise pollution in vicinity
- Opportunity to increase aesthetic appeal

### Disadvantages:

- Potential for disruption to local residents with road diversion causing increased travel time
- Traffic is diverted to adjacent streets
- Delay emergency vehicles within local neighborhoods
- Typically high costs