

#### CITY COUNCIL AGENDA REPORT

Meeting Date: October 19, 2023

From: Director of Public Works/City Engineer

**Subject:** Bayshore Boulevard Traffic Calming

Community Goal/Result: Safe Community

**Purpose:** To discuss the community's needs and desires for interim and/or long term

traffic calming on Bayshore Boulevard.

**Recommendation:** Provide direction to staff.

#### **Background**

The volume and speed of traffic on Bayshore Boulevard, especially in the reach between Old County/Tunnel and San Bruno Avenue has been a topic of concern for many years. In particular, the west side of Bayshore raises concerns regarding pedestrian safety for tenants of the mobile home park.

Prior to COVID, Bayshore experienced traffic volumes in the range of 20,000 average vehicles per day (this figure includes both north and southbound traffic). More recent studies additionally indicate that as much as two-thirds of this traffic is pass-through, meaning it neither originates from nor ends in Brisbane.

The last Engineering & Traffic Survey conducted to establish speed limits on Bayshore found that 85% of the observed vehicles were travelling at 50 MPH. More recent surveys completed by the Police Department show that current 85<sup>th</sup> percentile speeds may be 6-10 MPH faster during weekday commute periods, and even greater during weekend peak periods.

Based on requests from multiple Councilmembers, the City Engineer proposed a plan to calm this reach of Bayshore through a selective implementation of lane reductions and geometry changes. In 2022, the City received a final report from the Safe Transportations Research and Education Center (SafeTREC), "Brisbane Bayshore Complete Streets Safety Assessment." The report included a citywide assessment of our current best practices and opportunities to increase street safety. Additionally, the report focused on and validated the suggestions for calming this area of Bayshore through lane reductions and multimodal improvements.

To complete the full project, which is addressed in the enclosed select portions of the SafeTREC report, would be a significant undertaking. The primary cost driver is the installation of concrete sidewalks, and that effort would push the cost north of \$1M. Staff continues to monitor grant opportunities closely with assistance from Renne Public Policy Group, but we have not yet found a likely outside funding source for this work.

#### Discussion

Staff has recently ordered two radar speed signs for placement on Bayshore on the approach to the mobile home park. These signs include message feedback of TOO FAST for speeding vehicles and THANK YOU for vehicles travelling at the speed limit.

The question now is whether Council desires to have additional traffic calming measures installed in the near term. One concept that could be put in place quickly for less than \$50,000 would be the installation of low profile traffic separators such as the one shown below:



#### High-Performance, Low-Profile Traffic Separator Curb

Tuff Curb® XLP is an extreme low profile, high-performance curbing system designed to endure damaging high-speed, high-impact applications. It is ideal for use in cities, on HOV lanes, bridge decks, parking structure decks, for bike lane delineation, or anywhere low-profile traffic separation is required. Tuff Curb® XLP is also approved for installation on curved roadways.

Tuff Curb® XLP is MASH 2016 accepted for reimbursement on federally

Tuff Curb® XLP is MASH 2016 accepted for reimbursement on federall funded projects.

This curb has undergone extensive testing and analysis. It has been recognized for exceeding safety standard NCHRP-350, is Category 1 Self Certified, and MASH 2016 accepted. This rigorous level of testing ensures optimal performance and maximum durability.

The concept is to place three sets of these on the inside edge of the yellow median stripe adjacent to the #1 lane and on the inside edge of the white bicycle stripe adjacent to the #2 lane. The intent of this installation is to leave the lane widths the same as they are now, but to give drivers the visual impression that the lanes are narrower, which usually results in reduced speeds. An example of this concept applied only to the median of a 2-lane road is shown here:



**Fiscal Impact:** To be determined.

Measure of Success: Reduced vehicle speeds on Bayshore Boulevard

#### **Environmental Review**

In the event that Council directs staff to complete the visual road narrowing concept discussed above, that work will be categorically exempt from provisions of CEQA in that the proposal is to alter an existing facility without expanding existing uses (California Code of Regulations, Title 14, Division 6, Chapter 3, Article 19, §15301 "Class 1 – Existing Facilities").

#### **Attachments**

Randy Breault, Public Works Director

1. Selected portions of 2022 SafeTREC report.

Clay Holstine, City Manager

Clay Holstins

# 4. Complete Streets Audit Results and Suggestions

### 4.1 Overview

This Chapter presents the observations and recommendations made during the walking audit conducted in the City of Brisbane along Bayshore Boulevard with City staff and staff from Fehr & Peers on June 2, 2022. The recommendations are based on best practices and discussions with the participant group regarding local needs and feasibility. A glossary of the candidate treatment options is presented in **Appendix A**.

Walking audits are typically conducted to understand the needs, issues, and opportunities associated with walking and biking in the study area. During a walking audit, positive practices are observed, and issues and opportunity areas are noted. Observations are based on how motorists are behaving around pedestrians and bicyclists and how pedestrians and bicyclists are behaving, especially at intersections (for example, if pedestrians are crossing at unmarked locations to avoid certain intersections, why might they feel the need to do so?).

The suggestions in this report are based on general knowledge of best practices in complete streets design and safety as well as limited field observations. As this report is conceptual in nature, the City may conduct more detailed studies before finalizing and implementing any physical changes. Conditions may exist in the focus areas that were not observed and are not compatible with recommendations in this report. City staff may conduct further analysis to refine or discard the recommendations in this report if they are contextually inappropriate or do not improve pedestrian safety or accessibility due to conditions including, but not limited to, high vehicular traffic volume or speeds, physical limitations on space or sight distance, or other unsafe conditions.

## 4.2 Selection of Focus Area

The focus area was chosen based City interest in evaluation and concern over collision risk as interest in and demand for walking, biking and transit along Bayshore Boulevard are anticipated to increase. The audit focused on the southern section of Bayshore Boulevard between Old County Road / Tunnel Avenue and San Bruno Avenue.

**Figure 4-1** shows the study area and surrounding transportation context. Before the construction of US-101, Bayshore Boulevard served as a main thoroughfare connecting San Francisco through Brisbane, down the Peninsula. Previously a Caltrans facility, the corridor is now under the jurisdiction of the City of Brisbane. With the increased development in the area and a transition away from primarily industrial-based land uses, the City aims to transform the corridor from a high-speed, auto-oriented street to one that better serves multimodal needs and the community of Brisbane.



FIGURE 4-1: STUDY AREA AND SURROUNDING CONTEXT.

Bayshore Boulevard has a posted speed limit of 45 miles per hour and is currently designated as a Truck Route due to the connection it provides between industrial land uses and US-101. Based on average weekday traffic volume data collected in May 2022, approximately 11 percent of vehicle volumes along the corridor in Brisbane are trucks, with more truck volumes in the northbound direction. Based on data provided by the City's Police Department collected in September 2018, the 85<sup>th</sup> percentile speed along the corridor was between 56-60 mph for the weekday AM and PM peak periods, between 61-65 mph for the weekend AM period, and between 66-67 mph for the weekend PM peak period. Based on data collected in May 2022, the average weekday AM and PM peak 85<sup>th</sup> percentile speeds were between 50-55 mph. These speeds are notably higher than the posted speed and also higher than desired by the City.

While recognizing the need to maintain the connection to US-101 for trucks, the City desires a more multi-modal-friendly corridor that slows vehicle speeds and provides a separated, protected space for people to bike and walk along the corridor. These spaces can be created while improving parking and maintaining access for the land uses on the west side of the corridor. The City has made investment in spot improvements around bicycle and pedestrian safety infrastructure in the area, but has exhausted low-cost, spot location-based solutions. Recent improvements include a buffered bike lane with rumble strips along the study corridor, accessible pedestrian signals with push buttons at intersections, and prohibiting certain movements to eliminate the potential of conflicts (e.g., eastbound left turn from Valley Drive onto

Bayshore Boulevard). This assessment will help the City consider corridor-wide complete street improvements.

Specific audit focus locations and their suggested improvements are shown in Figures 4-2 through 4-7. The location selected for analysis was the corridor of Bayshore Boulevard between Old County Road and San Bruno Avenue, with consideration of the following intersections and segments:

- 1. Intersection 1: Bayshore Boulevard / Old County Road
- 2. Segment 1: Bayshore Boulevard between Old County Road and Van Waters and Rogers Road
- 3. Intersection 2: Bayshore Boulevard / Van Waters and Rogers Road
- 4. Segment 2: Bayshore Boulevard between Van Waters and Rogers Road and San Bruno Avenue
- 5. Intersection 3: Bayshore Boulevard / San Bruno Avenue

A road diet is recommended along the entirety of the corridor to reallocate space and create a separated mixed-use path for non-motorized users along the west side of the corridor. To preserve access to the existing driveways and on-street parking in the southernmost portion of the study corridor, a southbound only frontage road is recommended. The following subsections present the key issues identified during the walking audit, along with suggested improvements responding to the issues at each site.

# 4.3 Location #1: Intersection 1 - Bayshore Boulevard / Old County Road

The intersection of Bayshore Boulevard and Old County Road /Tunnel Avenue is signalized and includes four channelized right-turns. Old County Road provides a connection to the community park, and Tunnel Avenue provides connection to southbound US-101 via Lagoon Road. Bayshore Boulevard has a posted speed limit of 45 mph. Parking is currently prohibited on all legs of the intersection except for the northbound shoulder of Bayshore Avenue north of Tunnel Avenue, which allows for 2-hour parking. There is a bus stop on both the east and west sides of Bayshore Boulevard south of the intersection.

## **Suggested Improvements**

To improve pedestrian, bicycle and motor vehicle activity at this location, the following improvements are suggested:

- Removed channelized turns on the west side of the intersection (southbound approach of Bayshore Boulevard and eastbound approach of Old County Road).
- Implement a protected intersection 4 on all four approaches.
- Implement a raised and separated multi-use path along eastern edge of Bayshore Boulevard adjacent to southbound traffic with a designated bus pull-out zone.
- Implement a designated bus pull-out zone for northbound buses.
- Stripe high-visibility crosswalks across all legs of the intersection, including both remaining slip lanes.
- Leave current lane configuration until south of existing median.

<sup>4</sup> What is a Protected Intersection: https://nacto.org/publication/dont-give-up-at-the-intersection/protected-intersections/

These improvements are shown in **Figure 4-2**.

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FIGURE 4-2: RECOMMENDATIONS FOR BAYSHORE BOULEVARD AND OLD COUNTY ROAD

# 4.4 Location #2: Segment 1 - Bayshore Boulevard between Old County Road & Van Waters & Rogers Road

Bayshore Boulevard between Old County Road and Van Waters and Rogers Road is a four-lane road with two lanes in each direction and a rumble-strip buffer-separated bike lane on each side. The posted speed limit is 45 miles per hour. There is a median along the entirety of the corridor: at the northern end of this segment, the median includes landscaping, but further south along this segment and along the rest of the corridor, the median is striped. There is one driveway on the west side of the roadway, adjacent to the southbound traffic, for MK Pipelines Inc.

### **Suggested Improvements**

To improve pedestrian, bicycle and motor vehicle activity at this location, the following improvements are suggested:

- After the landscaped separated median ends, implement a road diet to reduce the number of lanes to one in each direction with a striped median that acts as at center turn lane necessary to access driveways.
- Extend the width of the separated area with the multi-use path to be as wide as possible with the new road diet and provide landscaping adjacent to the path.
- At the existing driveway of MK Pipeline Inc., stripe a high-visibility pedestrian and bicycle crossing adjacent to the western edge of the roadway.

These improvements are shown in Figure 4-3.

FIGURE 4-3: RECOMMENDATIONS FOR BAYSHORE BOULEVARD BETWEEN OLD COUNTY ROAD / TUNNEL AVENUE AND VAN WATERS AND ROGERS ROAD



Northern segment (left); southern segment (right).

# 4.5 Location #3: Intersection 2 - Van Waters and Rogers Road / Bayshore Boulevard

Van Waters and Rogers Road acts as a driveway for warehousing and industrial land uses. The intersection of Van Waters and Rogers Rd and Bayshore Blvd is signalized. There are channelized northbound and westbound right turns and there are left turn pockets on both the north and south legs of the intersection. There is a bus stop on the east side of Bayshore Boulevard south of the intersection.

### **Suggested Improvements**

To improve pedestrian, bicycle and motor vehicle activity at this location, the following improvements are suggested:

- Move the bus stop to the north side of the intersection and create a dedicated pull-out zone with sidewalk access.
- Stripe high-visibility crosswalks across Bayshore Boulevard.

These recommendations are shown in Figure 4-4.

FIGURE 4-4: RECOMMENDATIONS FOR BAYSHORE BOULEVARD AND VAN WATERS AND ROGERS ROAD



# 4.6 Location #4: Segment 2 - Bayshore Boulevard between Van Waters and Rogers Road and San Bruno Avenue

Bayshore Boulevard between Van Waters and Rogers Road and San Bruno Ave is a four-lane road with two lanes in each direction and a rumble-strip buffer-separated bike lane on each side. The posted speed limit is 45 miles per hour. There is a striped median along the entirety of the segment that acts as a two-way left turn lane to access driveways. On the west side of the roadway adjacent to southbound traffic, there is on-street parking and there are multiple driveways for various land uses, including the Sierra Point Trailer Park.

### **Suggested Improvements**

To improve pedestrian, bicycle and motor vehicle activity at this location, the following improvements are suggested:

- Implement a southbound drive lane and on street parking along the west side of the roadway that can act as a frontage road, be used to preserve access to the adjacent land uses and ensure access to the on-street parking.
- Where there is a need to preserve access to the existing driveways, create breaks in the multi-use path and implement high-visibility crosswalks for bicycles and pedestrians.

These recommendations are shown in **Figure 4-5.** 

FIGURE 4-5: RECOMMENDATIONS FOR BAYSHORE BOULEVARD BETWEEN VAN WATERS AND ROGERS

**ROAD AND SAN BRUNO AVENUE** 





Northern segment (left); southern segment (right).

# 4.7 Location #5: Intersection 3 - Bayshore Boulevard / San Bruno Avenue

The intersection of San Bruno Avenue and Bayshore Boulevard is side-street stop controlled. There is a channelized southbound right turn, and there is a left turn pocket on the northbound approach of the intersection. On the north leg of the intersection, in the median, there is a "Bus Only" red paint zone. Left turns are prohibited from San Bruno Avenue onto northbound Bayshore Boulevard, except for buses.

### **Suggested Improvements**

To improve pedestrian, bicycle and motor vehicle activity at this location, the following improvements are suggested:

- Continue the road diet through the intersection and transition back to existing lane configuration south of the intersection.
- Consider signalizing the intersection.
- Create signage indicating to drivers approaching from the south that they are entering a slower corridor and alerting them of the presence of pedestrians and bicyclists.

These recommendations are shown in **Figure 4-6.** 

Further analysis required to determine how much space for parking is needed.

Add a signal. Create a "gateway" to signal to drivers that this is a different type of street.

Transition back to existing lane configuration.