



Memorandum

Date: March 6, 2020
To: Matt Kelly, CCTA
From: Eleanor Leshner and Inder Grewal, Fehr & Peers
Subject: Existing Safety Plan Review – Contra Costa Vision Zero Framework & Systemic Safety Approach

WC16-3343.01

This memorandum summarizes recent traffic safety plans and projects in Contra Costa County to lay the foundation for the development of the Contra Costa Vision Zero Framework & Systemic Safety Approach project. This summary describes countywide plans, systemic safety plans, active transportation plans, and corridor plans that focus on safety and have been completed since 2015 or are ongoing as of Winter 2020. Contra Costa organizations and local jurisdictions have recently adopted or implemented several important safety projects the Vision Zero Framework can build on. Several recent projects have focused on addressing systemic safety issues as well as incorporating robust public outreach, “pop-up” temporary demonstration (i.e., “living preview”) installations, and design innovations such as Class IV separated bikeways.

Countywide Plans

Countywide Bicycle & Pedestrian Plan Update (Contra Costa Transportation Authority)

In 2018, the Contra Costa Transportation Authority (CCTA) adopted the Countywide Bicycle & Pedestrian Plan (2018 CBPP) Update. The 2018 CBPP reflects many new policies, best practices, and standards developed since the 2009 CBPP, through the following four approaches:

- Focus on the “interested but concerned” group of bicyclists, who represent most of the population and need clearly separated facilities to feel safe and comfortable



- Use level of traffic stress (LTS) to evaluate how stressful a roadway is for bicyclists and create a network of low-stress bikeways that better serve bicycle riders of all ages and skill levels, promote safer travel behavior across all modes, and could attract more riders that identify with the “interested but concerned” group
- Incorporate new practices and standards that focus on making crosswalks and bikeways safer and more connected, including traffic-separated bikeways
- Encourage local agencies to develop “complete streets” plans – both alone and collaboratively – to identify designs for streets and implement low-stress facilities for walking and biking

Key elements of this cross-jurisdictional and multifaceted project included a comprehensive collision analysis, the development of a low-stress countywide bikeway network (CBN), and identification of priority pedestrian areas (PPA). The project also conducted various “pop up” community outreach events countywide (at BART stations, farmers markets, and community events) and an online townhall to provide different opportunities for community engagement and “meet people where they are.” The plan also provides design guidelines for innovative facilities such as Class IV separated bikeways and protected intersections. One of the key implementation actions recommended in this plan was for CCTA to develop a Vision Zero framework and Systemic Safety approach for the County.

Contra Costa Transportation Authority Safe Routes to School (Contra Costa Transportation Authority)

In 2016, CCTA completed their Safe Routes to School (SR2S) Needs Assessment, which comprehensively evaluated SR2S programs and projects throughout the county. The countywide SR2S needs assessment involved extensive outreach focused on creating partnerships between county agencies, school districts, and local jurisdictions to streamline the ongoing identification and delivery of SR2S projects. Based on this assessment, CCTA developed an online SR2S resource guide, synthesizing best practices, case studies, model policies and programs, and standards and guidelines in one place. The tools provided in the resource guide help local jurisdictions strategically address engineering, programming, and funding challenges for school-related access and safety projects.

Contra Costa County Vision Zero Action Plan (Contra Costa County)

Contra Costa County is in the process of developing a Vision Zero Action Plan to address severe injury and fatal collisions on County-owned roadways, largely located in unincorporated areas. The Vision Zero Action Plan will identify key collision trends, priority corridors, and an implementation strategy to address identified trends. The comprehensive implementation strategy will encompass engineering, education, and enforcement measures.





Systemic Safety Plans

The Systemic Safety Analysis Report (SSAR) and Local Roadway Safety Plan (LRSP) programs are statewide programs that support local agencies in developing a holistic approach to systemic traffic safety. SSARs take a proactive safety approach that focuses on evaluating an entire roadway network using a defined set of criteria to identify high-risk roadway characteristics. Systemic analysis acknowledges that historical collision data is not sufficient to prioritize countermeasures across a system. Likewise, LRSPs also take a proactive approach to roadway safety by creating a framework to systematically identify and analyze problems and recommend safety improvements. Projects identified in SSARs and LRSPs will be considered for Highway Safety Improvement (HSIP) funding.

San Pablo SSAR

In 2018, the City of San Pablo conducted a SSAR to evaluate roadway safety at four specific intersections. To achieve some of project's systemic goals, the San Pablo SSAR report comprised the following elements:

- Analysis of bicycle and pedestrian collision data to identify collision trends and the main contributors to collisions resulting in severe injuries and fatalities
- Analysis of how different roadway and bike facility types affect pedestrian and bicycle safety
- Prioritization and cost-benefit analysis of site-specific infrastructure improvements to address primary collision types throughout the City

The projects identified in the SSAR will be considered as potential candidates for HSIP funding.

Local Road Safety Plan

In 2019, Caltrans released a new funding application for jurisdictions to develop Local Roadway Safety Plans (LRSP). Several Contra Costa jurisdictions have been awarded funding for the development of a LRSP, which are listed below. None of these cities have started their LRSP as of yet.

- Antioch
- Concord
- El Cerrito
- Lafayette
- Pittsburg
- Pleasant Hill
- Richmond
- San Ramon
- Walnut Creek





Future cycles of the HSIP will require jurisdictions to have an adopted Local Road Safety Plan. Caltrans has confirmed that this Contra Costa Vision Zero Framework will “check the box” for CCTA member jurisdictions to apply for HSIP funding in the future.

As part of developing the Contra Costa Vision Zero Framework, CCTA will develop resources including a Vision Zero database and “how to” guide to assist local jurisdictions in the adoption of Vision Zero policies and implementation of safety projects. These resources could also set the groundwork for local jurisdictions to develop robust LRSPs. Caltrans is also likely to release additional LRSP funding and CCTA will share application materials with local jurisdictions if and when this funding becomes available.

Active Transportation Plans (ATPs)

The Active Transportation Program in California was created through Senate Bill 99 to encourage increased use of active modes of transportation, such as walking and biking, and to meet state-mandated greenhouse gas (GHG) emissions reduction goals. ATPs typically contain goals, policies, and recommendations for developing and implementing pedestrian and bicycle networks, as well as education, encouragement, enforcement, and evaluation programs. ATPs often contribute to roadway safety by identifying deficiencies or risks in the active transportation network, through analysis of network gaps and collision trends and development of countermeasure strategies. The projects described below are examples of ATPs that have taken a more proactive approach to safety and/or have developed walking and biking networks with a focus on making them safe and comfortable for people of all ages and abilities, and therefore have moved beyond conventional collision analysis. ATPs that have taken a more conventional approach to safety analysis are listed below.

Pittsburg Moves

The City of Pittsburg is currently finalizing their ATP, known as *Pittsburg Moves*. The purpose of Pittsburg Moves is to increase walking and biking in the City by identifying and prioritizing improvements that enhance safety, accessibility, and connectivity between housing, schools, transit, parks, community centers, and commercial areas. The City conducted a comprehensive crosswalk assessment to identify potential safety enhancements on marked crosswalks located on high-volume, high-speed roadways. This assessment helped identify appropriate countermeasures to enhance crosswalk safety, such as median refuges, high visibility striping, and flashing beacons. A “pop-up” demonstration project (a.k.a. “living preview”) was conducted near the Pittsburg Center BART Station to test the recommended safety strategies and gather feedback from the community. The Plan also provides a formal commitment to Vision Zero and sets the goal of eliminating all bicycle and pedestrian severe injuries and fatalities in Pittsburg by 2040.





City of Concord Bicycle, Pedestrian, and Safe Routes to Transit Plan

In 2016, the City of Concord adopted their Bicycle, Pedestrian, and Safe Routes to Transit Plan, which focuses on the development of a pedestrian and bicycle network that is safe and comfortable for all ages and abilities. The Plan focuses on improving access to transit stops and stations as well as the Iron Horse Trail, Lime Ridge Open Space, and the Contra Costa Canal Trail, and includes “human-centered” design guidelines for pedestrian and bicycle facilities. The plan also recommends wayfinding signs and maps, secure places to park bicycles, and other education and encouragement programs as features that support the recommended pedestrian and bicycle networks.

Other Recent Active Transportation Plans

Other ATPs that have been developed over the past five years – or are currently under development – in Contra Costa County include:

- Danville Town-wide Bicycle Master Plan (ongoing)
- Pleasant Hill Citywide Bicycle and Pedestrian Master Plan (ongoing)
- City of San Ramon Bicycle Master Plan (2018)
- Brentwood Pedestrian Connectivity Study (2018)
- City of San Pablo Bicycle and Pedestrian Master Plan (2017)
- The City of El Cerrito Active Transportation Plan (2016)
- Town of Moraga Walk Bike Plan (2016)

Corridor Studies

Several Contra Costa cities have recently conducted major corridor safety studies to improve safety on arterial roadways. The studies have generally sought to provide safe access to transit, implement complete streets designs, reduce potential conflicts between vehicles and active modes, and improve access to key destinations for people walking and biking by incorporating innovative analysis methods and community engagement techniques. Several key projects are summarized below, and projects still in early planning stages are listed below for reference.

San Pablo Avenue Safe Routes to Transit, El Cerrito

As part of the San Pablo Avenue Specific Plan, the Safe Routes to Transit study seeks to improve transit access for people walking and biking in midtown El Cerrito. Given the limited right-of-way on San Pablo Avenue and the number of competing users, the study recommends installing Class II buffered bike lanes with bus boarding islands and pedestrian safety enhancements within the study area. The bus boarding islands would reduce conflicts between buses and bicyclists since the buffered bike lane would be installed between the





boarding island and the sidewalk. This study seeks to manage demand on the corridor by improving transit operations and creating safe routes to transit, therefore making public transit a more attractive alternative to driving in a more suburban setting.

Rumrill Boulevard Complete Streets, San Pablo

The City of San Pablo is currently in the design and permitting phase of the Rumrill Boulevard Complete Streets project. Located in a diverse area of the city, Rumrill Boulevard has historically served as an automobile-oriented corridor and represents a gap in the existing bicycle and pedestrian network, which poses safety concerns for the neighborhoods surrounding the corridor. The project seeks to reorient the corridor to serve the needs of all users and all modes by reallocating roadway space. Improvements include Class IV separated bikeways along the length of the corridor, bicycle supportive infrastructure (e.g., bike parking), new crosswalks, flashing beacons at crosswalks, ADA ramps, improved lighting, and new traffic signals.

Yellow Brick Road Iron Triangle Walkable Neighborhood Plan, Richmond

In 2019, the City of Richmond completed final plans for the Yellow Brick Road Iron Triangle Walkable Neighborhood Plan. The decade-long, community-driven planning and design process seeks to improve walkability to key destinations within Richmond's Iron Triangle Neighborhood as well as safety on both east-west and north-south pedestrian-oriented corridors. These corridors will include yellow-colored brick roadways and sidewalks intended to calm traffic and highlight the neighborhood's pedestrian network.

Richmond-San Rafael Bridge "People Path," Richmond

In November 2019, the Metropolitan Transportation Commission (MTC) and Caltrans opened the pilot project for the Richmond-San Rafael Bridge Bicycle and Pedestrian Path. The two-way separated "People Path" separates people walking and biking from vehicles with a moveable concrete barrier and replaces a maintenance lane on the upper deck of the bridge. The path provides an important active transportation link between Contra Costa County and Marin County and fills a critical gap in the planned 500-mile long San Francisco Bay Trail. In addition to implementing the path on the bridge, the project includes buffered bicycle lanes and protected intersections on Richmond roadways leading up to the bridge, and provides a direct route from the Richmond BART station. One of the challenges in implementing this project is the level of traffic congestion on the Richmond-San Rafael Bridge. Public officials and residents from both counties have lobbied to restrict active modes on the bridge during peak commute hours and instead use the "People Path" as an additional vehicle lane to mitigate congestion. However, MTC and Caltrans have determined that a bicycle and pedestrian facility on the bridge would encourage travel by active transportation modes during peak commute hours and serve as a transportation demand management (TDM) strategy. The new path is a temporary demonstration project and Caltrans will evaluate its use and traffic impacts over a four-year period to determine whether to implement a permanent path.





Railroad Avenue Complete Streets Study, Pittsburg

The City of Pittsburg is currently conducting a transportation planning and engineering study to improve multimodal access and safety along Railroad Avenue near the Pittsburg Center BART Station. The complete streets study prioritizes the travel modes in the following order: pedestrian and bicycle access, transit operations, and motor vehicle mobility. This project has taken an innovative approach to analyzing safety along the corridor: in addition to analyzing historical collision data, the project analyzes “near-miss” traffic incidents¹ involving all travel modes using high-resolution cameras and Brisk Synergies software. This kind of near-miss analysis is an innovative systemic safety tool since it seeks to proactively address potentially fatal or harmful interactions between people walking and bicycling, and motor vehicles.

Monument Boulevard Corridor Community-Based Transportation Plan, Concord

In 2020, CCTA, in partnership with the City of Concord, anticipates completing the Monument Boulevard Corridor Community-Based Transportation Plan (CBTP). This CBTP seeks to update the Monument Boulevard Corridor to be more compatible with land use and demographic-related changes along the corridor since the first CBTP was adopted for this area in 2006. As part of the public outreach process, roadway users expressed concerns related to pedestrian and bicycle safety, with an emphasis on SR2S. The plan recommends SR2S improvements including low-stress bikeways and a “bicycle school bus,” among others. Additional recommended infrastructure improvements include enhanced crossings at specified distances, traffic signal coordination, closure of sidewalk gaps, and consolidation of commercial driveways.

Iron Horse Trail Corridor Plan, Contra Costa County

Contra Costa County is currently addressing public comments on the draft Iron Horse Corridor Active Transportation Study. The study analyzes opportunities and constraints for the entire length of the 18.5-mile long Iron Horse Trail Corridor within Contra Costa boundaries. Through collaboration with multiple cities, extensive public outreach, and data analysis, the study finds that the greatest safety issues are related to intersection crossings and trail access. To address these concerns, the study proposes building a bicycle superhighway, a long-distance bicycle route that is entirely separated from vehicular traffic. This long-term vision would eliminate at-grade intersection crossings and increase access points from key destinations along the corridor. Implementing a bicycle superhighway would require significant coordination between the County, the five local jurisdictions along the corridor, and the East Bay Regional Park District.

¹ Near-miss traffic incidents refer to “incidents in which no property was damaged, and no personal injury was sustained, but where, given a slight shift in time or position, damage or injury easily could have occurred.” (OSHA)





Marsh Creek Corridor Multi-Use Feasibility Study, Contra Costa County

Contra Costa County is currently exploring the feasibility of designing a non-motorized trail along a 12-mile stretch of the Marsh Creek Road corridor between Round Valley Regional Preserve and the Clayton city limits. Marsh Creek Road serves as an alternative route to State Route 4 for vehicles traveling between central and east Contra Costa, where vehicles often travel at high speeds. Through extensive public outreach and an evaluation of trail alignment alternatives, the study seeks to leverage the corridor's rural terrain to provide a useful and enjoyable transportation corridor for non-motorized travel, including pedestrians, bicyclists, and equestrian users.

Other Recent Corridor Studies

Other corridor studies that have been recently completed in the past year– or are currently under development – in Contra Costa County include:

- Lincoln Avenue Complete Street Project, Walnut Creek (ongoing)
- Pleasant Hill Road, Lafayette (ongoing)
- Pleasant Hill Road Complete Streets Study, Pleasant Hill (2019)
- ConnectOrinda Plan, Orinda (2019)

Conclusion

In the past five years, many important safety-projects have been completed, or are ongoing. Several have incorporated proactive collision data collection and/or analysis methods, such as 'near-miss' data collection and analysis in Pittsburg. Several projects have also included robust public outreach, such as the "pop-up" events as part of the Iron Horse Trail Corridor Plan, Marsh Creek Corridor Multi-Use Feasibility Study, and others, which serve to "meet people where they are" and broaden community engagement. Recent plans and projects, such as the 2018 CBPP Update and Richmond-San Rafael Bridge "People Path," have also incorporated innovative design treatments, such as Class IV separated bikeways and protected intersections. These projects will serve as a foundation to develop the Countywide Vision Zero Framework and Systemic Safety Approach.

