



STAFF REPORT

DATE: January 14, 2020

TO: Bryan Montgomery, City Manager *Approved and Forwarded to the City Council*

FROM: Joshua McMurray, Community Development Director

SUBJECT: **Oakley General Plan Update Work Session – Mobility**

Background and Recommendation

This work session on the General Plan Update will be focused on providing the City Council information related to Mobility. The City’s consultant, De Novo Planning Group, has prepared a white paper to assist in the discussion. The focus of the City Council Work Session is to: 1) present the City Council with the information contained in white paper, 2) identify elements of the General Plan that we anticipate revising to address Mobility, and 3) ask the City Council for their input.

Included with this Staff Report is the Mobility White Paper that discusses the topic in detail.

Recommendation

Staff recommends the City Council review the information provided, through the Staff Report and Power Point presentation, and provide Staff and De Novo Planning Group with comments and direction.

Attachments

1. White Paper – Mobility

OAKLEY

General Plan Update



December 2019

MOBILITY WHITE PAPER

City of Oakley Focused General Plan Update

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1. MOBILITY SETTING

The transportation system moves people and goods from one place to another, and, in doing so, it affects each community's character, natural and built environment, and economic development patterns. Alternatively, the community's development pattern helps shape the transportation system. This White Paper describes the existing mobility setting in Oakley where relevant to updating the Circulation Element of Oakley's *General Plan*. Oakley's current Circulation Element was developed in 2002, prior to the completion of the Highway 4 freeway bypass to the west of Oakley that has reduced traffic volumes on Main Street.



REGIONAL TRANSPORTATION CONTEXT

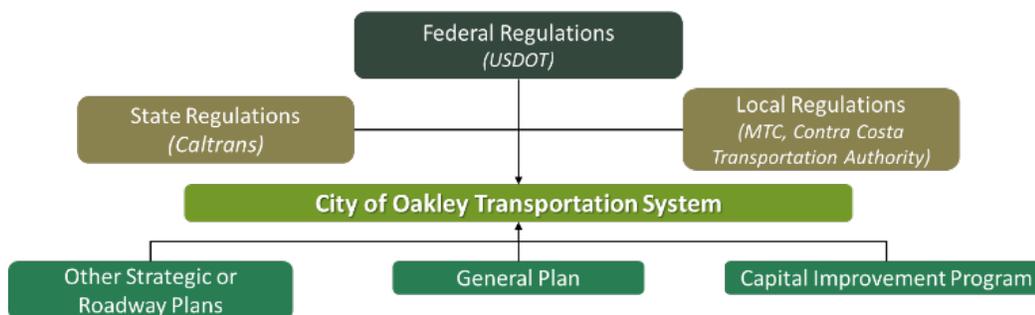
Located near the San Joaquin River Delta, the City of Oakley (City) is part of the rapidly developing northeastern portion of Contra Costa County. Due to higher connectivity and multiple transportation options, coordination among the transportation system becomes crucial for the continuous growth of the City.

Oakley lies just outside the Bay Area Rapid Transit (BART) service area and is in proximity of State Routes 4 (CA-4) and 160 (CA-160). The recent extension of eBART services towards Antioch Station provides regional public transit access along with Tri-Delta Transit, while a planned Amtrak station in Oakley will enhance regional connections via Amtrak's *San Joaquin* trains that operate between Oakley and Bakersfield. Figure 1 shows the key regional transportation facilities.

LOCAL CONTEXT

Much of Oakley has a suburban spatial structure characterized by relatively low densities and a prevalence of automobile travel compare to other travel modes, as is common in newer suburban areas throughout the United States. Oakley continues to attract people who work or live across the Bay Area for the suburban lifestyle and affordable housing prices. Similarly, businesses are locating in the region to capitalize on land availability and the growing workforce population.

REGULATORY FRAMEWORK



The City of Oakley General Plan, along with a variety of regional, state and federal plans, legislation, and policy directives, provide guidelines for the safe operation of streets and transportation facilities in Oakley. While the City has primary responsibility for the maintenance and operation of transportation facilities within the City, City staff also works on a continual

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basis with responsible regional, state, and federal agencies including the Contra Costa County Transportation Authority (CCTA), the Bay Area's Metropolitan Transportation Commission (MTC), the California Department of Transportation (Caltrans), the Federal Highway Administration (FHWA), and others, to maintain, improve, and balance the transportation needs of the community.

KEY STATE REGULATIONS RELEVANT TO GENERAL PLAN UPDATE

SENATE BILL 743 AND TRANSPORTATION PERFORMANCE METRICS

The California legislature passed Senate Bill (SB) 743 in 2013 that requires changes to the California Environmental Quality Act (CEQA) regarding the analysis of transportation impacts that will be required statewide by July 1, 2020. Traffic impact criteria and transportation performance standards in most cities have typically focused on motor vehicle level of service (LOS) as the primary criterion. LOS is an analysis methodology that assesses the performance of roadways based on average motor vehicle delay at intersections. The use of motor vehicle delay to analyze traffic impacts for CEQA purposes was originally based on the assumption that reducing delay to automobiles would thus reduce the pollution caused by idling gasoline intersections. However, the longtime emphasis on reducing automobile delay when evaluating environmental impacts under CEQA had the effect of often resulting in wide intersections with high levels of traffic capacity that ultimately serve as barriers to walking and bicycling, conflict with quality of life and urban design goals. That emphasis on traffic capacity ultimately came to be viewed as contributing to increased rates of motor vehicle travel throughout the state, which ultimately produces higher levels of air pollution due to the total volume of motor vehicle travel, when expressed on a "vehicle miles traveled" (VMT) basis. Key outcomes of SB 743 are that:

- Vehicle miles traveled is to be the primary performance metric for evaluating transportation impacts for CEQA purposes across California, with a statewide deadline of July 1, 2020 for local jurisdictions to apply the VMT threshold.
- Changes to CEQA requirements do not require a specific methodology for measuring VMT and identifying impact thresholds, but instead defer to local jurisdictions to identify methodologies and thresholds applicable to each local setting.
- The Technical Advisory on Evaluating Transportation Impacts in CEQA published by the Governor's Office of Planning & Research (OPR) describe recommended methodologies for cities to consider when updating their transportation impact thresholds. OPR recommends that VMT be quantified on a "per capita" (per resident) basis for residential projects, and on a "per employee" for office development. For retail projects, OPR recommends that that VMT be evaluated based on the "net change" in VMT (not a rate) since retail projects typically redistribute traffic within a market area rather than resulting in net new VMT (thus a net increase in VMT could be considered potentially significant). OPR provides several recommendations for mixed-use projects, including evaluating each use separately or evaluating mixed-use projects based on the appropriate methodology for the predominant land use.
- VMT impact thresholds are to be based on comparing "projects" under CEQA with area-wide averages, with project impacts evaluated under a "per capita" or "per employee" methodology considered potentially significant if project VMT exceeds the selected threshold. Establishing VMT impact thresholds that are 15 percent below existing rates has been suggested, but not required, in order to help meet statewide greenhouse gas (GHG) reduction goals. Cities can choose whether to base their VMT impacts thresholds on regional, countywide, sub-regional or citywide averages.

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Based on the SB 375 mandate: the Focused General Plan update will include updated policy and performance standards relevant to vehicle miles traveled (VMT) and changes to impact thresholds for CEQA studies that will satisfy state requirements.

While LOS will no longer be relevant for CEQA purposes: it is nonetheless anticipated that LOS-based performance goals will remain relevant to non-CEQA planning purposes. Therefore: the Focused General Plan Update also provides an opportunity for the city to consider updates to its adopted LOS goals and/or standards.

CALIFORNIA COMPLETE STREETS ACT

A key goal of the Focused General Plan update is to review and, where necessary, modify the City's current circulation network plan and policies to ensure that "complete streets" are provided. The California Complete Streets Act requires that any substantive revision of the circulation element of a city or county's general plan must identify how they will safely accommodate the circulation of all users of the roadway including transit riders, pedestrians, bicyclists, individuals with disabilities, and seniors as well as motorists (California Complete Streets Act of 2008, 2008).

Cities seeking funding through the MTC's One Bay Area Grant (OBAG) Program are expected to show compliance with Complete Streets policies. MTC via OBAG is a potentially major source for transportation funding. Meeting eligibility requirements allows cities to apply for Local Street and roads preservation, safe routes to schools, pedestrians and bicycle improvements, and transportation for livable community funds (Metropolitan Transportation Commission, 2019).

- The term "Complete Streets" refers to a balanced, multimodal transportation network that meets the needs of all users of streets -- including bicyclists, children, and persons with disabilities, motorists, movers of commercial goods, pedestrians, public transportation, and seniors. A "Complete Street" is one that provides safe and convenient travel in a manner that is suitable to the local context.
- Provision of safe mobility for all users, including motorists, bicyclists, pedestrians and transit riders, contributes to the Caltrans's vision: "improving mobility across California". The successful long-term implementation of this policy is intended to result in more options for people to go from one place to another, less traffic congestion and greenhouse gas emissions, more walkable communities (with healthier, more active people), and fewer barriers for older adults, children, and people with disabilities.
- Economically, complete streets can help revitalize communities, and they can give families the option to lower transportation costs by using transit, walking or bicycling rather than driving to reach their destinations. Caltrans is actively engaged in implementing its complete streets policy in all planning, programming, design, construction, operations, and maintenance activities and products on the State Highway System (Caltrans, 2014).



CALTRANS - CONTEXT SENSITIVE STREET DESIGN

Caltrans promotes "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context

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sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders. Context sensitive solutions meet transportation goals in harmony with community goals and natural environments. They require careful, imaginative, and early planning, and continuous community involvement (Caltrans, 2001).

REGIONAL TRANSPORTATION PLANNING

REGIONAL TRANSPORTATION PLAN AND SUSTAINABLE COMMUNITY STRATEGY

The current Regional Transportation Plan and Sustainable Community Strategy (RTP/SCS) named *Plan Bay Area 2040* was jointly produced and adopted by MTC and the Association of Bay Area Governments (ABAG) on July 26, 2017. *Plan Bay Area 2040* builds on earlier work to develop an efficient transportation network, provide more housing choices, and grow the region in a financially and environmentally responsible way. *Plan Bay Area 2040* is a roadmap to help Bay Area cities and counties preserve the character of our diverse communities while adapting to the challenges of future population growth. The next update to the RTP/SCS, *Plan Bay Area 2050*, is expected to begin in late 2019 and will outline how the Bay Area can meet its transportation needs through 2050 (Metropolitan Transportation Commission, 2019).

CONTRA COSTA TRANSPORTATION AUTHORITY

The CCTA is the designated congestion management agency for Contra Costa County. CCTA adopted the most recent Countywide Transportation Plan (CTP) in 2017. The CTP provides the overall direction for achieving and maintaining a balanced and functional transportation system within Contra Costa County while strengthening links between land use decisions and transportation. It outlines the Contra Costa Transportation Authority's vision for Contra Costa and establishes goals, strategies, projects, and actions for achieving that vision. The CTP identifies a Vision, Goals, and Strategies; a review of issues facing the countywide transportation system; an overview of the cooperative planning process in Contra Costa; and an implementation plan for meeting the transportation goals. CCTA most recently updated the Countywide Bicycle Plan (CBBP) in 2009. The CCTA also works to plan, fund, and implement transit programs that serve communities and residents within the region. CCTA maintains several tools to support its transportation planning and growth management activities. CCTA also makes these tools available to local jurisdictions and agencies to support their planning efforts. These include:

- The Countywide Travel Demand Model – providing traffic forecasts through the year 2030.
- Technical Procedures – to assist local staff and consultants in conducting transportation impact studies developing Action Plans for Routes of Regional Significance, and assessing level of service on Basic Routes
- Comprehensive Transportation Project List (CTPL) – a comprehensive database of current and proposed transportation projects
- Land Use Information System (LUIS) – a database of local demographic information available at the Traffic Analysis Zones (TAZ) level
- System Monitoring – reports on how the transportation system is operating, including the monitoring of Multi-Modal Transportation Service Objective (MTSO) and the Congestion Management Program (CMP) network

CONTRA COSTA COUNTY VISION ZERO

Contra Costa County is in the process of developing a "Vision Zero" safety plan to address severe and fatal collisions on County-owned roadways, with the goal of zero fatalities. The plan will identify key collision trends on County-owned roads, priority corridors in which severe and fatal collisions occur, and an implementation strategy to address the collision trends. The implementation strategy will include engineering, education, and/or enforcement measures. Through a holistic and data-driven approach, the County and its partner agencies are implementing studies and programs to help people move safely.

LOCAL TRANSPORTATION PLANNING

CIRCULATION ELEMENT OF THE OAKLEY 2020 GENERAL PLAN

The Circulation Element of the General Plan identifies the City's long-range circulation plan and describes the policies, existing condition of the citywide transportation network and recommendations on planned and projected facilities. It describes and illustrates the City's mobility network, and provides guidelines that will support and complement existing and planned development. The purpose of the Circulation Element includes ensuring that transportation and land use decisions are coordinated, promoting the safe and efficient transport of goods, making efficient use of existing facilities, and protecting environmental quality. The City's circulation plan is intended to serve a buildout population of 67,000 residents and 34,500 jobs within Oakley.

The *Oakley 2020 General Plan* was adopted in 2002 and updated most recently in 2016, and includes the Circulation Element in Chapter 3. Table 1 shows the current adopted Circulation Element goals, policies and programs as shown in the *Oakley 2020 General Plan*.

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TABLE 1: ADOPTED TRANSPORTATION GOALS, POLICIES & PROGRAMS (OAKLEY 2020 GENERAL PLAN)

Goals	Policies	Programs
<p>Roadways: Goal 3.1 Provide an efficient and balanced transportation system.</p>	<p>3.1.1 Strive to maintain Level of Service D as the minimum acceptable service standard for intersections during peak periods (except those facilities identified as Routes of Regional Significance).</p> <p>3.1.2 For those facilities identified as Routes of Regional Significance, maintain the minimum acceptable service standards specified in the East County Action Plan Final 2000 Update, or future Action Plan updates as adopted.</p> <p>3.1.3 Keep roadway facilities in optimal condition.</p> <p>3.1.4 Consistent with the California Vehicle Code, direct trucks to appropriate truck routes.</p> <p>3.1.5 Encourage a multi-modal circulation system that supports non-automobile travel.</p> <p>3.1.6 Address future roadway needs through both new road construction and management of existing and planned roadway capacity.</p> <p>3.1.7 Create and maintain fee and other programs adequate to assure sufficient financing and land to maintain and achieve prescribed Levels of Service.</p> <p>3.1.8 Mitigate conflicts between new roadway improvements and existing rural roadways when the identified conflicts threaten public health, safety and welfare.</p>	<p>3.1.A Prior to approval of all projects, demonstrate that traffic levels of service and performance standards will be maintained, or that a funding mechanism and timeline has been established which will provide the infrastructure to meet the standards. Ensure that developers fund traffic impact studies that identify on-site and off-site effects and mitigations, and that they contribute appropriate funding for on-site and off-site improvements.</p> <p>3.1.B If it cannot be demonstrated prior to project approval that levels of service will be met per Program 3.1.A, the City may consider the development but defer its approval until the standards can be met or assured. In the event that a signalized intersection exceeds the applicable level of service standard, the City may approve projects if the City can establish appropriate mitigation measures, or determine that the intersection or portion of roadway is subject to a finding of special circumstances, or is a route of regional significance. Mitigation measures specified in the action plans shall be applied to all projects that would create significant impacts on such regional routes, as defined by the Authority in consultation with local agencies and as permitted by law.</p> <p>3.1.C Monitor intersection Levels of Service on a biannual basis at key reporting intersections.</p> <p>3.1.D Implement circulation improvements required to mitigate the effects of growth and to maintain the Level of Service standard. Prioritize roadway improvement projects based on traffic volume, traffic safety, pedestrian and bicyclist safety, availability of funding, and other measures of need as appropriate.</p> <p>3.1.E Maintain a pavement management program, and identify and prioritize projects in the City's Capital Improvement Program to maintain the quality and integrity of the City's roadway system. Street maintenance should include regular cleaning and upkeep of bicycle routes to remove debris and alleviate poor pavement conditions that discourage bicycle riding.</p> <p>3.1.F Install and maintain truck route signing and marking to direct truck traffic onto designated truck routes.</p> <p>3.1.G During the planning and development review processes for new development and new roadways, incorporate provisions for bicycle, pedestrian, and public transit modes, where appropriate.</p> <p>3.1.H Encourage and promote car pools, vanpools, alternative work hours, employee shuttles, and other incentives to reduce single-occupant vehicle trips.</p>

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Goals	Policies	Programs
<p>Bicycles and Pedestrians: Goal 3.2 Promote and encourage walking and bicycling.</p>	<p>3.2.1 Provide maximum opportunities for bicycle and pedestrian circulation on existing and new roadway facilities.</p> <p>3.2.2 Enhance opportunities for bicycle and pedestrian activity in new public and private development projects.</p> <p>3.2.3 Create a bicycle and pedestrian system that provides connections throughout Oakley and with neighboring areas, and serves both recreational and commuter users.</p> <p>3.2.4 Design new roadway facilities to accommodate bicycle and pedestrian traffic. Include Class I, II, or III bicycle facilities as appropriate. Through the Design Review process, provide sidewalks on all roads, except in cases where very low pedestrian volumes and/or safety considerations preclude sidewalks.</p> <p>3.2.5 Promote the provision of bike lockers and bike racks at park and ride lots within the City.</p>	<p>3.2. A During the site plan review process, encourage new development to incorporate design features that support bicycling and walking, particularly in those areas that could provide access to and between major destinations. This could include: bicycle racks, lockers, showers, and other support facilities; continuous sidewalks; an internal pedestrian circulation plan; walkways for pedestrians and bicyclist between cul-de-sacs; and at least one major entrance adjacent to a sidewalk, wherever possible.</p> <p>3.2.B Develop a comprehensive Bicycle and Pedestrian Master Plan, including design standards for bicycle and pedestrian facilities, evaluation of current bicycle promotion programs, analysis of bicycle and pedestrian accidents, and a capital improvement program to ensure adequate maintenance of bicycle and pedestrian facilities. Develop a strategic approach to pursuing state and federal funding for bicycle and pedestrian improvement projects, working closely with neighboring jurisdictions.</p> <p>3.2. C Coordinate with the Antioch Unified School District, Liberty Union High School District, and Oakley Union Elementary School District to create well-designed Routes to Schools, maps for bicyclists and pedestrians, and to provide adequate facilities to park bicycles.</p> <p>3.2. D Actively participate in the adoption and implementation of the Contra Costa Countywide Bicycle Plan.</p>
<p>Public Transportation: Goal 3.3 Provide adequate, convenient, and affordable public transportation.</p>	<p>3.3.1 Design new roadways and facilities to accommodate public transit.</p> <p>3.3.2 Ensure that new public and private development supports public transit.</p> <p>3.3.3 Encourage transit providers to improve transit routes, frequency, and level of service to adequately serve the mobility needs of Oakley residents, including those dependent on public transit.</p>	<p>3.3.A When reviewing development proposals, coordinate with Tri-Delta Transit on appropriate standards for bus bays, bus turnouts, bus shelters, and other public transit amenities in new roadway design.</p> <p>3.3. B Coordinate with the Antioch Unified School District, Liberty Union High School District, and Oakley Union Elementary School District to promote access and roadway designs that support school bus requirements.</p> <p>3.3. C During the development review process, require provisions in site plans for public transit vehicle stops and turning maneuvers, where appropriate.</p> <p>3.3. D Pursue opportunities to provide additional funding for public transit service within Oakley, and between Oakley and surrounding communities.</p> <p>3.3.E Participate in the development of the Tri-Delta Transit Short Range Transit Plan to ensure that adequate fixed route transit service is provided within Oakley, and between Oakley and surrounding communities, and that the public transit system provides convenient transfers between transit services and other modes of travel.</p>

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Goals	Policies	Programs
		<p>3.3. F Explore potential locations for Park- and-Ride facilities within Oakley.</p> <p>3.3. G Coordinate with the Bay Area Rapid Transit District (BART) and the Contra Costa Transportation Authority regarding potential opportunities for BART or light rail service to Oakley.</p>
<p>Neighborhood Traffic Management: Goal 3.4 Minimize the intrusion of through traffic on residential streets.</p>	<p>3.4.1 Direct non-local traffic onto collector streets and arterials.</p> <p>3.4.2 Maintain traffic speeds and volumes on neighborhood streets consistent with residential land uses.</p> <p>3.4.3 Provide adequate capacity on collector and arterial streets to accommodate travel within the City.</p>	<p>3.4. A During the development review process, design neighborhood street systems to discourage motor vehicle “cut-through” traffic on residential streets.</p> <p>3.4. B Design residential streets to balance vehicular movement and safety with slower speeds. Such measures should also be designed to avoid creating hazards for bicyclists.</p> <p>3.4. C Identify and eliminate potential future “short-cut” routes. Ensure that there is sufficient vehicular capacity on collector streets and arterials to facilitate travel between neighborhoods and other areas. During the development review process, coordinate access from neighborhoods to collectors and arterials to minimize motor vehicle “cut- through” traffic.</p> <p>3.4. D Develop traffic management guidelines for the City as a tool for consistent responses to neighborhood concerns about traffic speed and volume issues.</p>
<p>Traffic Safety: Goal 3.5 Monitor, improve, and enhance traffic safety and reduce the potential for traffic accidents.</p>	<p>3.5.1 Provide consistent, comprehensive traffic safety law enforcement throughout Oakley.</p> <p>3.5.2 Design a roadway system that maximizes safety for all users.</p> <p>3.5.3 Maintain roadway facilities to maximize safety.</p>	<p>3.5. A Allocate adequate resources for traffic enforcement activities.</p> <p>3.5.B As part of the Capital Improvement Program, identify and prioritize projects that enhance and improve vehicular, bicycle, and pedestrian safety.</p> <p>3.5.C Ensure that new roadways are designed to minimize conflicts due to driveway access and parking.</p> <p>3.5.D Ensure that adequate funding is available to maintain roadway marking, signs, and striping in optimal condition.</p> <p>3.5.E Enhance safety at railroad grade crossings, including coordination with Contra Costa Water District, Diablo Water District, East Bay Regional Park District and Iron house Sanitary District in the construction at no cost to the City of a new controlled, at-grade crossing on the BNSF tracks by the northward extension of Rose Avenue.</p> <p>3.5.F Coordinate with local fire protection and law enforcement agencies on emergency response routes and plans.</p>

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Goals	Policies	Programs
<p>Regional Coordination: Goal 3.6 Participate in regional transportation and land use planning to promote and protect the interests and objectives of Oakley residents and workers.</p>	<p>3.6.1 Ensure that Oakley is represented in all East County regional and sub-regional forums.</p> <p>3.6.2 Work with other agencies to address multi-jurisdictional issues affecting Oakley.</p> <p>3.6.3 Ensure that roadway facilities that serve Oakley and neighboring communities are planned for consistency at City boundaries.</p> <p>3.6.4 Ensure that Oakley obtains its fair share of regional improvements (such as the State Route 4 Bypass) that are funded from impact fees collected within Oakley.</p> <p>3.6.5 Encourage implementation of Contra Costa County's East Contra Costa Bikeway Plan.</p>	<p>3.6.A Attend and participate in regularly scheduled TRANSPLAN meetings.</p> <p>3.6.B Provide written comments on environmental documents, plans, and programs prepared by neighboring agencies.</p> <p>3.6.C Secure representation on the Contra Costa Transportation Authority Board when appropriate.</p> <p>3.6.D Actively participate in all activities related to the East Contra Costa Regional Fee and Financing Authority and the East County Transportation Improvement Authority.</p> <p>3.6.E Coordinate with CCTA, Caltrans, and other transportation agencies to ensure that Oakley's transportation planning objectives are included during the roadway planning and design process.</p> <p>3.6.F To maintain compliance with the Contra Costa Transportation Authority Growth Management Program, implement all actions assigned to Oakley in the East County Action Plan.</p> <p>3.6.G Participate in sub-regional efforts towards transportation demand management, consistent with the East County Action Plan.</p> <p>3.6.H Work with TRANSPLAN to maintain compliance with the requirements of Measure J, specifically participating in the ongoing regional transportation process with other jurisdictions and agencies, the Regional Transportation Planning Committees, and CCTA.</p>
<p>Land Use Coordination: Goal 3.7 Coordinate land use and transportation planning to maximize use of limited</p>	<p>3.7.1 To the extent feasible, protect existing and future land uses from the noise, visual, and other impacts of major roadway construction projects.</p> <p>3.7.2 Ensure that the density and mixture of future land uses (both public and private) encourage transit usage, walking and bicycling.</p> <p>3.7.3 Provide sufficient parking, while considering the effect of parking supply on the use of alternate modes.</p> <p>3.7.4 Mitigate development impacts and ensure that new development pays its own way.</p>	<p>3.7.A Work with public and private agencies to minimize the effect of major roadway construction projects, such as the State Route 4 Bypass, on nearby land uses.</p> <p>3.7.B During the development review process, size streets and intersections to accommodate planned land uses consistent with the Level of Service standard, to the extent feasible. Consider the effects of pedestrian-, bicycle-, and transit-oriented land uses when determining appropriate infrastructure size and configuration.</p> <p>3.7.C Maintain compliance with the Contra Costa Transportation Authority Growth Management Program by reviewing Oakley General Plan Amendments for consistency with the East County Action Plan Final 2000 Update, or future Action Plan updates as adopted.</p>

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Goals	Policies	Programs
<p>transportation resources.</p>	<p>3.7.5 New development should not result in inconsistent street frontage improvements along streets adjacent to and serving the project.</p> <p>3.7.6 Mitigate potential circulation conflicts between new roadways and existing rural roadways adjacent to new development.</p> <p>3.7.7 Encourage site planning that promotes all modes of transportation, and that minimizes vehicular trips between different land uses.</p> <p>3.7.8 Pursue a mix of both new housing and additional jobs in Oakley, as part of the overall strategy to balance jobs and housing in East County.</p> <p>3.7.9 Support the Metropolitan Transportation Commission's Safe Routes to Schools program.</p> <p>3.7.10 Support and pursue Safe Routes to Schools projects to enhance pedestrian safety within Oakley.</p>	<p>3.7.D Participate in regional land use and transportation planning efforts by sharing information about future development in Oakley with interested agencies and jurisdictions to create a balanced, safe, and efficient transportation system and to manage the impacts of growth.</p> <p>3.7.E Develop parking requirements that are consistent with the goals for increased use of alternative transportation modes, and that acknowledge opportunities for shared parking. During the development review process, ensure that development plans are consistent with the parking requirements in the Oakley zoning code.</p> <p>3.7.F Collect development impact and other fees and require any necessary roadway improvements and property dedications to ensure that each development project contributes its fair share toward necessary transportation improvement projects.</p> <p>3.7.G Develop streetscape design standards that recognize the role of streets not only as vehicle routes but also as part of an extensive system of public spaces where people live, neighbors meet, and businesses operate.</p> <p>3.7.H Review site plans and area plans to encourage mixed uses, thereby decreasing the number of vehicle trips required between uses. Promote land use patterns that maximize trip-linking opportunities. Locate mixed uses within walking or bicycling distance, and ensure that there are not physical barriers to walking and bicycling.</p>

ROADWAY DESIGN STANDARDS

This section describes the physical characteristics and current design standards for Oakley's roadway network.

ROAD CLASSIFICATIONS

The current General Plan Circulation Element identifies a functional classification system for each type of road. Oakley's roadway network is shown on Figure 2. Similar to many other suburban cities, Oakley's existing adopted street classifications were developed prior to the "complete streets" era and are primarily focused on defining the function and characteristics of each street for purposes of accommodating motor vehicle travel. The *Oakley 2020 General Plan* defines the existing street classifications as follows, further described on Table 2:

- **Arterial Streets** accommodate relatively high traffic volumes and provide the major circulation between activity centers, freeways, and other arterials. Access to local land uses is restricted along arterial streets, to preserve their capacity to serve higher volumes and longer distance travel. **Major arterials** are typically divided streets with four or more lanes. **Minor arterials** can have two or four lanes, and typically do not have a median or other divider.
- **Collector Streets** are two-lane streets used to travel between neighborhoods, usually for relatively short trips within neighborhoods or between local streets and the arterial street system. Collector streets have relatively low speed limits, and sometimes may have restricted access to neighboring land uses.
- **Local Streets** are two-lane streets designed for trips within neighborhoods, and to connect to collectors and arterial streets. Local streets provide low-speed access to neighborhood land uses, and usually carry less than 2,000 vehicles per day.

TABLE 2: ROAD CLASSIFICATIONS & STANDARDS (OAKLEY 2020 GENERAL PLAN)

CLASS	MOTOR VEHICLE LANES	LEFT-TURN POCKETS	MOTOR VEHICLE LANE WIDTHS (FEET)	MAXIMUM DESIRED DAILY TRAFFIC VOLUME ¹	BICYCLE LANES	SIDEWALK WIDTH	ON-STREET PARKING PROVISIONS	RIGHT-OF-WAY (ROW)
6-lane Divided Arterial	6 or more lanes	Preferred	Not specified	53,400	Bicycle lanes are recommended on all arterial and collector streets based on the typical road plans contained in the Circulation Element.	Not specified on the typical road plans contained in the Circulation Element.	Not specified	Not Specified
Major Arterial (Commercial Arterial)	4 to 6	If required	Not specified	35,600			Allowed but may be eliminated where adequate off-street parking is available	120'
Minor Arterial (Residential Arterial)	2 to 4	Preferred	Not specified	33,800			Not Allowed	120'
Typical Collector	2	No	Not specified	12,500			Allowed	70'
Greenway Collector	2	No	Not specified	12,500			Allowed	85'
Neighborhood Local	2	No	12'	2,000	Not applicable since travel lanes are not striped on local streets.	5'	Required	60'
Rural Local	2	No	12'	2,000		Not Required	Required	60'

¹BASED ON LONG RANGE ROADWAY PLAN, 2002; WALKWAY AND TRANSIT PROVISIONS ARE NOT SPECIFIED

SOURCE: CITY OF OAKLEY 2020 GENERAL PLAN, 2002

Table 3 summarizes street network classification miles for Oakley's street network that includes approximately 32 miles of arterial and collector street segments.

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Additional street design guidelines found in other elements of the *Oakley 2020 General Plan* include:

- Land Use Element Policy 2.7.1 aims to promote a comprehensive trail program that connects residential districts, parks and schools, employment centers and natural areas.
- Land Use Element Policy 2.8.1 specifies that the downtown area should be developed at a pedestrian scale with adequate sidewalks, street crossings and pedestrian resources.
- Land Use Element policy 2.8.3 specifies that street trees should be incorporated in the downtown area to shade sidewalks and provide a physical separation between the street and pedestrian sidewalks.
- Growth Management Element requires new development to have consistent street frontage along the street.
- Parks and Recreation Element provides design guidelines for bicycle facilities. Furthermore, it also identifies opportunities in developing available railroad right-of-way as future trails.

TABLE 3: STREET NETWORK MILES BY CLASSIFICATION

STREET CLASS	EXISTING (MILES)	PLANNED/PROPOSED NETWORK (MILES)
Major Arterial	16.56	1.41
Minor Arterial	7.31	1.67
Collector	8.55	2.5
Subtotal (Arterial & Collector Streets)	32.42	5.58
Local Streets ¹	151.37	TBD (estimated 25+)
Total	183.79	30+

¹ LOCAL STREETS INFORMATION COLLECTED FROM CITY OF OAKLEY GIS DATABASE

CIRCULATION PLAN

The Circulation Plan for Oakley that is contained in the *Oakley 2020 General Plan* described planned roadways based on conditions in 2002 when the plan was developed that describe the following as key elements of the City’s circulation plan:

- Completion of the Highway 4 by-pass to the west of Oakley (now completed) with interchanges at Laurel Road and Lone Tree Way.
- Expansion of Main Street (then Highway 4) to major arterial standards (4 to 6 lanes) with 6 lanes then recommended on westernmost segments. As described in the following section: traffic volumes have decreased by over 40 percent on Main Street since 2002, attributable to completion of the Highway 4 by-pass. The reduction in traffic volumes thus allows the city to reconsider whether future increase in motor vehicle lanes on Main Street is still desirable.
- Provision of a Downtown By-pass north of Main Street (then Highway 4) while encouraging pedestrian-oriented retail uses in downtown Oakley. Similar to the proposed increase in the number of travel lanes on Main Street: provision of a Downtown By-pass may no longer be needed given the reduction in traffic volume on Main Street that occurred since 2002.
- Extension of Laurel Road to the east to provide a direct connection with Cypress Road.
- Support for provision of a connection between Delta Road and Lone Tree Way,

The Circulation Plan contained in the *Oakley 2020 General Plan* does not identify any planned bikeways, while descriptions of pedestrian improvements are limited to the stated desire to encourage pedestrian-oriented retail uses in downtown Oakley.

LONG-TERM PLAN FOR MAIN STREET & REDUCED TRAFFIC VOLUMES

As described in the *Oakley 2020 General Plan*: the City's adopted circulation plan calls for Main Street to be widened from four to six lanes at buildout, based on traffic forecasts prepared in 2002 when Main Street still served as a portion of Highway 4, prior to the completion of the Highway 4 freeway by-pass to the west of Oakley. As shown on Table 4, more recent data indicates that daily traffic volumes on Main Street have been reduced by over 40 percent since 2002. Therefore, the General Plan Update provides an opportunity to reconsider the long-term plan for the ultimate buildout of Main Street, given more recent trends:



- The 2002 traffic forecasts contained in the *2020 General Plan* predicted that daily traffic volumes on the westernmost segments of Main Street (between Highway 160 and Vintage Parkway) were to increase from 30,000 to 39,500 daily vehicles (year 2002 volumes) to 48,000 to 66,000 vehicles at full buildout of Oakley with 67,000 residents.
- However: more recent traffic data on Main Street indicates that existing traffic volumes have decreased to between 17,500 and 21,200 daily vehicles, thus more than 40 percent lower than the 2002 volumes.

TABLE 4: MAIN STREET TRAFFIC VOLUME COMPARISON (2002 TO PRESENT)

ROADWAY	YEAR 2002 DAILY TRAFFIC VOLUMES ¹	RECENT DAILY TRAFFIC VOLUMES (2017-19) ²	REDUCTION IN TRAFFIC VOLUME SINCE 2002
Main Street, East of Bridgehead Road	39,500	23,400	-41%
Main Street, West of Empire Avenue	39,600	21,200	-46%
Main Street, East of Empire Avenue	31,700	17,900	-44%
Main Street, West of Vintage Parkway	30,000	17,900	-40%
Main Street, West of Rose Avenue	27,800	13,700	-51%
Main Street, South of Cypress Road	17,000	15,600	-8%
Main Street, South of Laurel Road	21,100	13,900	-34%

NOTE: ¹YEAR 2002 TRAFFIC VOLUMES AS IDENTIFIED IN THE OAKLEY 2020 GENERAL PLAN

²RECENT TRAFFIC VOLUMES BASED ON VOLUME COUNTS CONDUCTED BY TJKM IN 2018-19.

BICYCLE & PEDESTRIAN FACILITIES

The *2020 General Plan* adopted in 2002 recommended development of a Bicycle and Pedestrian Master Plan, but such a plan has not yet been prepared or adopted. The General Plan Update thus provides an opportunity to incorporate bicycle and pedestrian elements directly into the Circulation Element, consistent with "complete streets" principles identified on preceding pages. The relatively flat terrain and generally favorable climate condition encourages biking and walking activity in Oakley.

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SIDEWALK, PATH & CROSSWALK NETWORK

Most streets in Oakley provide sidewalk coverage, accessible curb ramps, and crosswalks, including pedestrian signals at signalized intersections. Enhanced crosswalks and/or bulbouts have been provided at specific crosswalks to reduce crossing distances. Sidewalks are provided in most of Oakley's single-family residential neighborhoods, in multi-family residential developments, and commercial developments.

Sidewalks and a variety of pedestrian amenities are particularly well-provided in downtown Oakley, including decorative paving and crosswalk treatments, curb extensions, benches, and street trees. The City Design Guidelines suggests provision of 6' sidewalk on arterial and collector streets and 5' sidewalk on local streets (City of Oakley, 2005).

Barriers to Walking

While the pedestrian network is generally well developed in Oakley, there are some locations where gaps or barriers limit pedestrian circulation, including lengthy crossings of busy streets and/or discontinuous street patterns in newer developments.



BICYCLE NETWORK

One of the underlying goals of statewide "complete streets" requirements is that all modes of travel, including bicycles, should be adequately accommodated on most city streets, not just streets that are designated as bikeways. Therefore, the provision of travel accommodations may occur throughout the city's transportation network. Designated bikeways are routes where an additional level of bicycle accommodation is to be provided. There are four classifications of designated bikeway facilities in California, as defined by the California Department of Transportation (Caltrans):

- **Multi-Use Paths (Class I Bikeways).** A path physically separated from motor vehicle traffic by an open space or barrier, and either: within a highway right-of-way or within an independent right-of-way used by bicyclists, pedestrians, joggers, skater, and other non-motorized travelers. Because the availability of uninterrupted rights-of-way is limited, this type of facility may be difficult to locate and more expensive to build relative to other types of bicycle and pedestrian facilities, but less expensive compared to building new roadways.
- **Bicycle Lanes (Class II Bikeways).** A portion of a roadway that has been set aside by striping and pavement markings for the preferential or exclusive use of bicyclists. Bicycle lanes are intended to promote an orderly flow of bicycle and vehicle traffic. This type of facility is established by using the appropriate striping, legends, and signs.
- **Bicycle Routes (Class III Bikeways).** Class III bicycle routes are facilities where bicyclists share travel lanes with motor vehicle traffic. Bike routes must be of benefit to the bicyclist and offer a higher degree of service than adjacent streets. They provide for specific bicycle demand and may be used to connect discontinuous segments of bicycle lane streets. They are often located on local residential streets.



Example of a Class II Bikeway

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- *Bicycle Boulevard*. In addition, many cities have installed an enhanced type of Class III Bicycle Route, referred to as a “Bicycle Boulevard.” Bicycle Boulevards are generally installed on relatively low-volume streets and often include elements to facilitate bicycle travel, such as reorienting stop signs to reduce delays to cyclists, and/or discouraging use by motorists making through trips, such as through inclusion of traffic calming measures.
- **Separated Bikeway (Class IV Bikeways)**. A Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and adjacent vehicle traffic. The physical separation may include flexible posts, grade separation, inflexible physical barriers or on-street parking. Separated bikeways generally operate in the same direction as vehicle traffic on the same side of the roadway. However, two-way separation bikeways can also be used, usually in lower speed environments.

Figure 3 shows the existing bikeways in Oakley. In recent years, the City expanded bikeways to connect several parts of Oakley. Table 5 summarizes the existing bikeway network length by type of facility. As shown: roughly 29 miles of bikeways have been installed, including nearly 15 miles of on-street bicycle lanes and 12.4 miles of multi-use paths. In addition, roughly 23 miles of additional bikeways are currently planned or proposed.

Major streets such as Main Street, Laurel Road, Carpenter Road, Neroly Road and Cypress Road have bike lanes but there are gaps in the bike network. Proposed bikeway network projects include upgrading the existing Class II bike lane on Harbor Street to a Class IV separated bikeway, and the existing Class II bike lanes on Railroad Avenue and East Leland Road to buffered bike lanes. Range Road has no current bicycle facilities but is designated as a future Class II bikeway. West Leland Road is currently a Class II bikeway and there are no planned improvements for this corridor (Contra Costa Transportation Authority, 2018).

TABLE 5: DESIGNATED BIKEWAY NETWORK MILES BY TYPE OF FACILITY

TYPE OF BIKEWAY	BIKEWAY CLASS	EXISTING (MILES)	PROPOSED OR PLANNED (MILES)
Multi-use Paths	I	12.4	8.8
Bicycle Lanes	II	15.5	14.0
Bicycle Routes	III	1.4	0.2
Separated Bikeways	IV	0.0	TBD*
Total	--	29.3	23.0

SOURCE: DATA DERIVED FROM TRAFFIC STUDIES CONDUCTED FROM 2014-16.

*PROPOSED CLASS IV SEPARATED BIKEWAYS ARE LIMITED TO PROPOSED CONVERSION OF EXISTING CLASS II BICYCLE LANES ON PORTIONS OF HARBOR STREET AND EAST LELAND STREET TO INCLUDE BUFFER TREATMENTS THAT MAY BE CONSISTENT WITH CLASS IV SEPARATED BIKEWAYS.

PUBLIC TRANSIT SERVICE

Following the opening of the Antioch eBART Station, there has been an increase in the number of transit riders. Tri-Delta Transit provides local and regional connectivity. Additionally, Antioch-Pittsburg Amtrak is located 15 minutes’ drive from the Downtown Oakley.

With plans to extend the BART service to the City of Brentwood and provision of Park-and-Ride facilities for the use by Tri-Delta transit buses, the transit ridership is expected to increase exponentially. Figure 4 depicts the transit system serving Oakley.

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TRI-DELTA TRANSIT BUS SERVICE

Tri-Delta Transit or the Eastern Contra Costa County Transit Authority (ECCTA) serves Oakley, Antioch, Pittsburg, Brentwood, and the unincorporated areas of East County. Within Oakley, Tri-Delta Transit operates four bus routes serving all major areas in the City. The Tri-delta transit now operates 15 local weekday and five weekends & holiday buses as compared to 11 weekday and three weekend buses in 2008. The local route fare also has been increased from \$1.25 in 2008 to \$2.00 in 2019. In 2018, ECCTA began operating their first battery electric transit bus. All buses have bicycle racks and are wheel chair accessible. Furthermore, all the Tri Delta Transit fixed routes allows the use of clipper cards.



PARATRANSIT

All Tri Delta Transit buses are accessible and many individuals with disabilities can use the fixed route bus service. However, if an individual is unable to use fixed route transportation, he/she may be eligible for ADA Paratransit transportation. Tri Delta Transit's Paratransit provides door-to-door public transportation service, for people who are unable to independently use the transit system due to a disability. Tri Delta Transit Paratransit service is also extended to individuals who are 65 years of age or older (Tri-Delta Transit, 2019). Paratransit operators are required by the Americans with Disabilities Act of 1990 to service areas within three-quarters of a mile of their respective, public fixed-route service.

E-BART SERVICE

In May 2018, BART service was extended ten miles to the east of the Pittsburg/Bay Point station to Antioch via the SR-4 median using smaller state-of-the-art Diesel Multiple Unit (DMU) vehicles referred to as "e-BART" service. The Antioch Station is located six miles from Downtown Oakley and can be accessed through Tri Delta Transit buses in addition to park-and-ride and bicycling. The BART connection provides services to San Francisco, San Francisco International Airport (SFO), and other major locations in the San Francisco Bay Area. The 109-mile BART system currently serves an average of over 10 million monthly riders, and over 410,000 average weekday riders.

The Downtown Oakley Priority Development Area (PDA) Preferred plan proposes a new train platform that would be located north of Main Street between 2nd Street and O'Hara Avenue, as shown on Figure 4. The transit center would provide connecting transit service to the train station as well as serve a proposed Park & Ride lot (City of Oakley, 2015).

AMTRAK RAIL

Amtrak is a passenger railroad service provider that provides intercity connectivity across the nation. A planned Oakley Station will soon serve the San Joaquin route which connects with Oakland to the west, Bakersfield in the south and Sacramento to the north (Amtrak, 2019). The Amtrak rail line further connects to the ACE Rail line at Stockton and may be used as alternative route to reach Fremont and San Jose (Altamont Corridor Express, 2019). Currently, the closest Amtrak station is located about 6 miles west in Antioch.

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TRUCK ROUTES

Figure 5 shows streets or portions of streets that are declared to be through truck traffic routes for the movement of heavy vehicles, and also shows railroad corridors through the city. Trucks typically cause a disproportionate share of damage to streets and generally requires three times more roadway space than private car.

Contra Costa's Northern Waterfront Economic Development Initiative (NWEDI) aims to improve the economic prosperity by creating a sustainable economy based on advanced manufacturing, innovation, and new technologies. The development of the DuPont Site will result in an increase in Truck traffic in the City of Oakley.



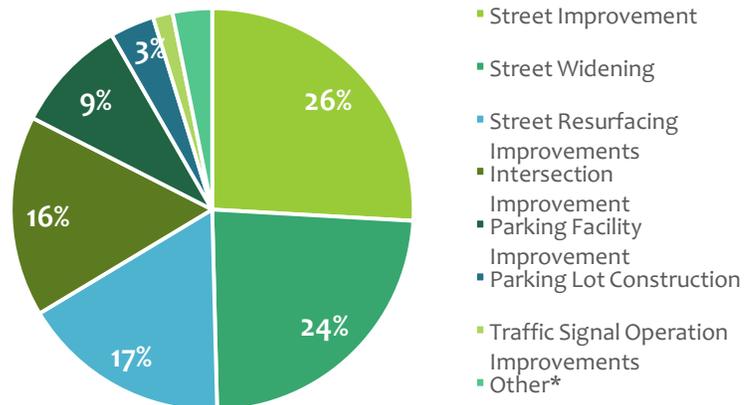
CAPITAL IMPROVEMENT PROGRAM

California law specifies that public works projects must be in conformance with the General Plan. This requires that the City, during each adopted update to its 5-year Capital Improvement Program (CIP) make findings that the updated CIP is in conformance with the General Plan, including the Circulation Element.

Oakley's current 5-year Capital Improvement Program (CIP) identifies funding for 18 street and 2 bridge projects totaling \$15.8 million for the FY 2018-19 CIP (City of Oakley, 2019)

The street projects include traffic calming, pavement improvements, streetscape improvements and other projects. Two projects focus on construction and improvement of Downtown Parking Lot Facilities. Other major projects include the Downtown Train Station and Laurel Road street widening and reconstruction project. Chart 1 shows the City's expenditure classification based on project type¹.

CHART 1 OAKLEY 5-YEAR CIP (2018-19): TRANSPORTATION EXPENDITURE BY PROJECT TYPE



¹ *Other- Other expenditure include concrete repair and replacement; Streetscape improvement; Street Safety Improvements; Traffic Calming Improvements and bridge reconstruction and rehabilitation.

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Oakley’s CIP does not yet appear to include categories relevant to “complete street” goals described on preceding pages. For example; Oakley’s current CIP does not identify funding specifically allocated to bikeway projects or pedestrian-focused improvements.

2. TRAVEL CHARACTERISTICS

TRAVEL MODES & TRIP PATTERNS

How people get around is an important indicator of the success of a transportation system. This section summarizes travel characteristics associated with the Oakley transportation network.

TRAVEL MODES TO WORK

According to the American Community Survey (ACS) 2013-17 5-year estimates for the year 2017, Oakley has a population of 39,950 including 18,071 employed residents as shown on Table 6. Over three-fourths of employed residents (76 percent) drove to work alone, higher than both the Contra Costa County average of 68 percent and 9-county Bay Area average of 66 percent. Approximately 13 percent of Oakley residents carpool to work, similar to countywide and Bay Area averages but a reduction from higher carpool rates of roughly 18 percent in 1990.

The primary reason for the higher rate of driving alone to work by Oakley residents appears to correlate with a much lower rate of transit use by Oakley residents, compared to countywide and regional averages. Just three percent of Oakley residents use public transit for travel to and from work, much lower than the Contra County average of 10 percent, and also lower than the 9-county Bay Area average of 11 percent. Oakley’s location outside of the direct BART service area is a key factor in the lower rate of transit use compared to most of Contra Costa County.

TABLE 6: WORK COMMUTE CHARACTERISTICS

JURISDICTION	CITY OF OAKLEY		CONTRA COSTA COUNTY		BAY AREA (9 COUNTY REGION)		STATE OF CALIFORNIA	
Population	39,950		1,123,678		8,686,062		38,982,847	
Employed persons ¹	18,071		520,162		4,180,640		17,589,758	
MODE SPLIT	NUMBER	PERCENTAGE ²	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Drove Alone	13,734	76%	354,230	68%	2,767,584	66%	12946062	74%
Carpool	2,422	13%	60,859	12%	438,967	11%	1829335	10%
Public Transit	506	3%	53,577	10%	447,328	11%	914667	5%
Walk	126	1%	8,843	2%	150,503	4%	474923	3%
Bike	72	0.4%	2,601	1%	71,071	2%	193487	1%
Other	344	2%	7,282	1%	66,890	2%	263846	2%
Worked at Home	867	5%	32,770	6%	238,296	6%	985026	6%

¹ POPULATION INCLUDES 16 YEARS OF AGE OR OLDER

² PERCENTAGES ARE ROUNDED OFF TO THE NEAREST INTEGER

SOURCE: U.S. CENSUS BUREAU, 2013-2017 AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES.

Travel Time to Work

According to ACS 2013-17, around 88 percent of employed residents worked outside the city of Oakley including 42 percent that work outside of Contra Costa County. Given those characteristics: the average commute time to work by employed Oakley residents is 41 minutes, which significantly higher than the Bay Area and statewide averages of 31 and 29 minutes, respectively as shown on Table 7. The average commute time for Oakley residents is also more than 10 percent higher than

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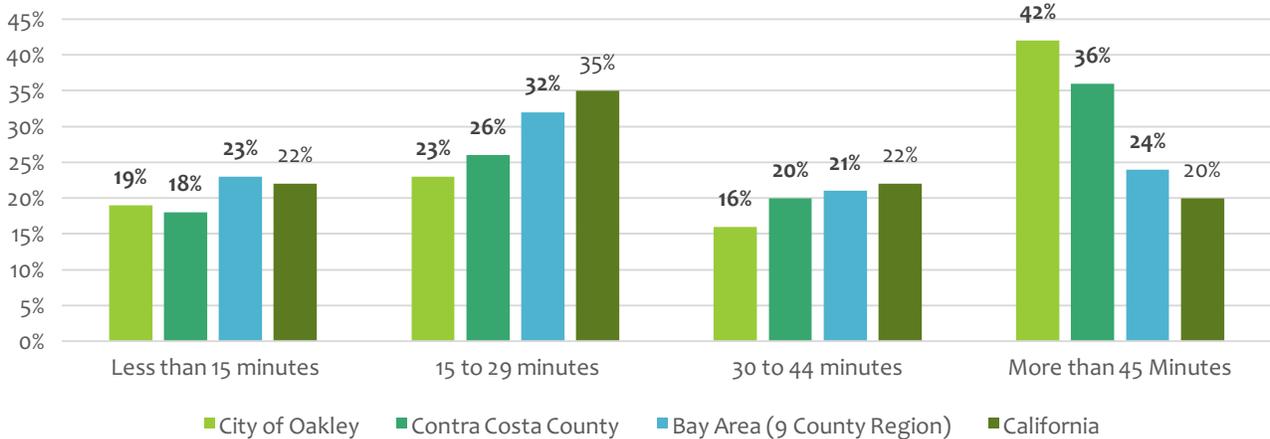
the countywide average for Contra Costa County. As shown on Chart 2: 42 percent of Oakley residents have a commute of longer than 45 minutes.

TABLE 7: MEAN TRAVEL TIME TO WORK

JURISDICTION	CITY OF OAKLEY	CONTRA COSTA COUNTY	BAY AREA (9 COUNTY REGION)	CALIFORNIA
Mean Travel Time to Work (in mins)	40.9	37.1	30.8	28.8

SOURCE: U.S. CENSUS BUREAU, 2013-2017 AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES.

CHART 2: TRAVEL TIME TO WORK



SOURCE: U.S. CENSUS BUREAU, 2013-2017 AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES.

VEHICLE MILES TRAVELED (VMT)

Vehicle miles traveled (VMT) is a common indicator used to quantify the amount of motor vehicle use in a specified area, and will become the basis for evaluating transportation impacts relevant to environmental impact studies prepared for CEQA purposes effective July 2020, particularly given the correlation between VMT and greenhouse gas (GHG) emissions. One VMT is defined as any type of motor vehicle being driven one mile. Many factors affect VMT including the average distance residents commute to work, school, and shopping, as well as the proportion of trips that are made by non-automobile modes. Areas that have a diverse land use mix and ample facilities for non-automobile modes, including transit, tend to generate lower VMT than auto-oriented suburban areas more distant from metropolitan centers.

Table 8 provides an estimate of VMT rates generated by Oakley residents and by non-residents employed in Oakley based on MTC data. Table 9 provides a comparison of Oakley’s VMT Per Capita rate with adjacent cities and with countywide and Bay Area (9-county) averages. As shown:

- The overall per capita rate of VMT for Oakley (residents & non-resident employees) is 23 daily miles per person.
- Oakley’s VMT rates are highest among Oakley residents employed outside of Oakley (applicable to most employed Oakley residents) that generate an average of 42 daily miles per person.
- Oakley’s per capita VMT rate of 23 miles per person is higher than other jurisdictions in eastern Contra County jurisdictions including Brentwood (21.2 miles per person), Antioch (19.7 miles per person) and Pittsburg (15.9 miles per person).

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- The overall average for eastern Contra Costa County (including Oakley) is 20.2 miles per person, roughly 2.8 miles per person lower than Oakley's rate of per capita VMT. Similarly, the overall average for all of Contra Costa County is 20.5 miles. Jurisdictions in Contra Costa County have higher rates of per capita VMT than the 9-county Bay Area average.

TABLE 8: VEHICLE MILES TRAVELED (VMT) ESTIMATE FOR OAKLEY

JURISDICTION	PERSONS	DAILY VMT	VMT PER CAPITA
Oakley resident / Works in Oakley	2,020	21,055	10.42
Oakley resident / Works outside of Oakley	16,396	690,840	42.13
Oakley resident / Non-worker	21,094	192,623	9.13
<i>Subtotal (Oakley residents only)</i>	<i>39,510</i>	<i>904,518</i>	<i>22.89</i>
Nonresidents working in Oakley	3,758	91,139	24.25
Total (including non-residents working in Oakley)	43,268	995,657	23.0

SOURCE: MTC FORECAST FOR YEAR 2020

TABLE 9: DAILY VMT PER CAPITA COMPARISON

JURISDICTION	2020 ESTIMATE	2040 FORECAST
Bay Area (9 counties)	15.1	14.3
Contra Costa County	20.5	19.4
Eastern Contra Costa County	20.2	19.1
Oakley	23.0	21.3
Antioch	20.6	19.7
Brentwood	21.2	20.6
Pittsburg	17.4	15.9

SOURCE: MTC FORECASTS FOR 2020 & 2040

TRAFFIC CONDITIONS

MOTOR VEHICLE TRAFFIC VOLUMES

Daily (24-hour) traffic volumes on key street segments are summarized below in Table 10 below. Traffic volumes are less than 60 percent of capacity on most segments:

- **4-lane arterials:** Daily traffic volumes on Oakley’s four-lane arterial segments range from 13,000 to 24,000 daily vehicles, and most segments are well below capacity. Oakley’s 4-lane street segments generally have an effective capacity of over 35,000 daily vehicles. Travel speeds are often higher than desired on 4-lane streets with excess capacities.
- **2-lane arterials & collectors:** Current volumes on two-lane segments of Oakley’s arterial and collector street network range from 5,000 to 15,000 daily vehicles. Two-lane arterial and collector streets can generally accommodate over 20,000 daily vehicles where frequent left-turn pockets are provided.

TABLE 10: CHARACTERISTICS OF MAJOR ROADWAYS

ROADWAY	MOTOR VEHICLE LANES	BICYCLE LANES	SIDEWALKS	POSTED SPEED LIMIT (MPH) ¹	DAILY MOTOR VEHICLE CAPACITY ² (C)	DAILY MOTOR VEHICLE VOLUME (V) ¹	V/C RATIO
Main Street, East of Bridgehead Rd	4	None	One side	45	35,600	23,400	0.66
Main Street, West of Empire Ave	4	2	One side	45	35,600	21,200	0.60
Main Street, East of Empire Ave	4	2	Both sides	40	35,600	17,900	0.50
Main Street, East of Vintage Pkwy	4	None	Both Sides	40	35,600	18,200	0.51
Main Street, East of Rose Ave	2	None	None	30	16,200	12,800	0.79
Main Street, South of Cypress Rd	2	None	Both sides	45	16,200	15,600	0.96
Main Street, South of Laurel Road	2	None	Both sides	40	16,200	13,900	0.86
Neroly Rd, South of Main St	2	None	None	40	16,200	5,100	0.31
E. Cypress Rd, East of Main St	4	2	Both sides	35	35,600	17,800	0.50
E. Cypress Rd, East of Sellers Ave	2	None	None	35	16,200	8,500	0.52
Empire Ave, South of Cypress Rd	4	None	Both sides	40	35,600	14,900	0.42
Empire Ave, South of Laurel Rd	4	2	One side	45	35,600	13,100	0.37

NOTE: ¹TJKM, 2018-2019 COUNTS

²CAPACITY ESTIMATE BASED ON OAKLEY 2020 GENERAL PLAN. 2-LANE ARTERIAL AND COLLECTOR STREET SEGMENTS CAN OPERATE WITH A HIGHER CAPACITY (EXCEEDING 20,000 DAILY VEHICLES) IF LEFT-TURN POCKETS ARE PROVIDED AT KEY INTERSECTIONS.

TRAFFIC OPERATIONS

Motor vehicle traffic operations on city streets are often evaluated based on intersection level of service (LOS) standards described in the Highway Capacity Manual (HCM). LOS is a qualitative measure based on average delay to vehicles. Table 11 summarizes the LOS definitions and relative delay to motorists, and also includes a V/C ratio relevant to the LOS methodology. Oakley has adopted LOS D, or a volume-to-capacity (V/C) ratio of 0.90, as the threshold of acceptability for signalized intersections. Any signalized intersection operating worse than LOS D would be considered inconsistent with this standard.

Most intersections in Oakley operate at an acceptable LOS. Table 12 summarizes current LOS levels at select intersections.

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TABLE 11: TRAFFIC LEVEL OF SERVICE (LOS) DEFINITIONS

LEVEL OF SERVICE	DESCRIPTION	SIGNALIZED INTERSECTION DELAY (D) (SEC)	UNSIGNALIZED INTERSECTION DELAY (D) (SEC)
A	Very low control delay, up to 10 seconds per vehicle. Progression is extremely favorable, and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.	≤ 10	0 ≤ 10
B	Control delay greater than 10 and up to 20 seconds per vehicle. There is good progression or short cycle lengths or both. More vehicles stop causing higher levels of delay.	10 to 20	10 to 15
C	Control delay greater than 20 and up to 35 seconds per vehicle. Fair progression or longer cycle lengths, or both cause higher delays. Individual cycle failures may begin to appear. Cycle failure occurs when a given green phase does not serve queued vehicles and overflow occurs. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	20 to 35	25 to 25
D	Control delay greater than 35 and up to 55 seconds per vehicle. The influence of congestions becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volumes. Many vehicles stop, the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35 to 55	25 to 35
E	Control delay greater than 55 and up to 80 seconds per vehicle. The limit of acceptable delay. High delays usually indicate poor progression, long cycle lengths, and high volumes. Individual cycle failures are frequent.	55 to 80	35 to 50
F	Control delay in excess of 80 seconds per vehicle. Unacceptable to most drivers. Oversaturation, arrival flow rates exceed the capacity of the intersection. Many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to higher delay.	>80	>50

SOURCE: CITYWIDE TRAFFIC MODEL UPDATE, 2019 AND HIGHWAY CAPACITY MANUAL (HCM) 2010 EDITION

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TABLE 12: EXISTING TRAFFIC LEVEL OF SERVICE (LOS) AT KEY INTERSECTIONS

ID	INTERSECTION NAME	CONTROL TYPE	AM PEAK		PM PEAK	
			DELAY (SEC) ¹	LOS ²	DELAY (SEC) ¹	LOS ²
1	Bridgehead Road/Main Street	Signalized	33.5	C	30.0	C
2	Live Oak Road/Main Street	Signalized	20.8	C	7.2	A
3	Big Break Road/Main Street	Signalized	15.9	B	16.9	B
4	Main Street/Carol Lane	Signalized	22.5	C	29.0	C
5	Main Street/Empire Avenue	Signalized	36.3	D	26.4	C
6	Vintage Parkway/Main Street	Signalized	41.9	D	31.9	C
7	Main Street/Norcross Lane	Signalized	15.9	B	9.0	A
8	O'Hara Avenue/Main Street	Signalized	14.5	B	11.5	B
9	Main Street/Cypress Avenue	Signalized	>80	F	27.9	C
10	Main Street/Laurel Road	Signalized	46.2	D	37.0	D
11	Main Street/Simoni Ranch Road	Signalized	31.6	C	15.7	B
12	Empire Avenue/Oakley Road	Signalized	22.9	C	29.6	C
13	Empire Avenue/W Cypress Road	Signalized	22.3	C	16.5	B
14	Empire Avenue/Laurel Road	Signalized	>80	F	>80	F
15	Empire Avenue/Carpenter Road	Signalized	14.3	B	9.7	A
16	Empire Avenue/Neroly Road	Signalized	>80	F	50.6	D
17	O'Hara Avenue/W Cypress Road	Signalized	24.4	C	19.7	B
18	O'Hara Street/Carpenter Road	Signalized	37.3	D	11.7	B
19	O'Hara Avenue/Neroly Road	Signalized	52.9	D	15.1	B
20	Neroly Road/Oakley Road	All-way Stop	10.2	B	9.6	A
21	Neroly Road/Live Oak Avenue	All-way Stop	12.2	B	10.3	B
22	Live Oak Avenue/Oakley Road	All-way Stop	18.4	C	9.0	A
23	Brown Road/Carpenter Road	Signalized	10.6	B	7.2	A
24	O'Hara Avenue/Laurel Road	Signalized	33.5	C	19.9	B
25	Mercedes Avenue/Laurel Road	Signalized	30.5	C	10.2	B
26	Brown Road/Laurel Road	Signalized	16.9	B	11.6	B
27	Neroly Road/Laurel Road	Signalized	19.3	B	10.7	B
28	Sellers Road/E Cypress Road	Signalized	18.4	B	17.2	B
29	Machado Lane/E Cypress Road	Signalized	12.8	B	11.2	B
30	Bethel Island Road/E Cypress Road	Signalized	10.2	B	8.0	A
31	Rose Avenue/Laurel Avenue ³	All-way Stop	>50	F	44.5	E
32	Rose Avenue/W Cypress Road	All-way Stop	35.5	E	13.8	B
33	Bridgehead Road/Wilbur Avenue	All-way Stop	9.4	A	8.9	A
34	E Cypress Road/Picasso Drive	Signalized	32.8	C	8.9	A

¹DELAY: AVERAGE CONTROL DELAY IN SECONDS PER VEHICLE, REPORTED VALUES ARE OVERALL FOR SIGNALIZED AND ALL-WAY-STOP-CONTROL

INTERSECTIONS; AND CRITICAL MINOR APPROACHES FOR TWO-WAY- STOP-CONTROL INTERSECTIONS.

²LOS: LEVEL OF SERVICE.

SOURCE: CITY OF OAKLEY, CITYWIDE TRAFFIC MODEL UPDATE, TJKM 2019.

Oakley Focused General Plan Update

SAFETY

COLLISION DATA

Collision history from the California Highway Patrol (CHP) Statewide Integrated Traffic Records System (SWITRS), University of California, Berkeley's Transportation Injury Mapping System (TIMS) and the City's Police Department records were obtained for five years (2013-2017) to determine existing motor vehicle collision trends. The locations of the motor vehicle collisions are shown in Figure 7. As shown in Table 13, there were a total of 540 reported collisions during the years from 2013 to 2017.

- Most frequently cited collision factor was Unsafe Speed (33 percent). The most common types of collisions are Rear-end (32 percent) and Broadside (21 percent) collisions involving motor vehicles.
- Fatalities and/or severe injuries occurred in just five percent of reported collisions, but disproportionately affected bicyclists, pedestrian and motorcyclists. As shown in Table 14 there were 27 fatal and severe injury crashes in the City of Oakley, out of which 22 percent involved pedestrians, 19 percent involved bicyclists, and another 22 percent involved motorcyclists.
- Pedestrians or bicyclists were involved in just 6 percent of reported crashes, but represented 75 percent of fatalities. The locations of reported bicycle and pedestrian collisions are shown in Figures 7. Roughly two-thirds of bicycle collisions occurred on just three streets: Main Street, three on O'Hara Avenue and three on Neroly Road. A large share of the pedestrian-involved collisions occurred on Main Street, O'Hara Avenue and Walnut Meadows Dr. Motorcycle crashes were also prominent on Main Street (23 percent).
- On an average, one fatality per year and five serious injuries are reported each year in Oakley.

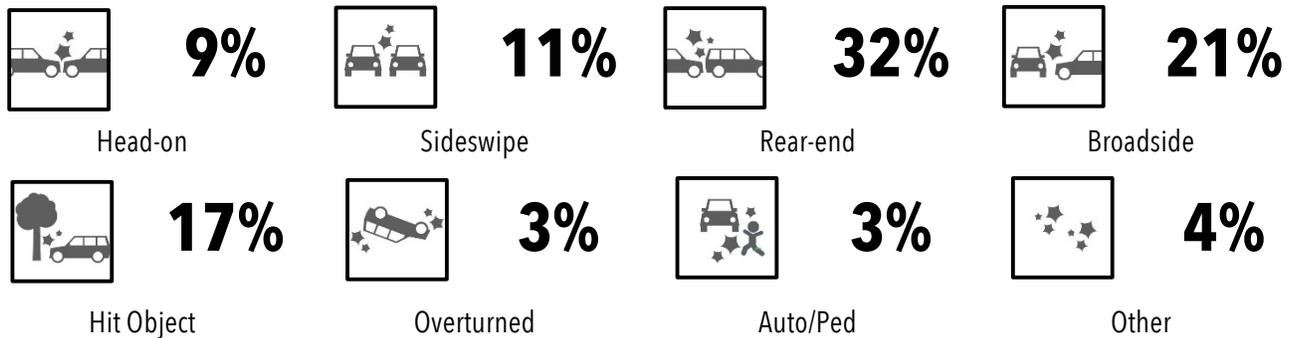


TABLE 13: TOTAL NUMBER OF REPORTED COLLISIONS BY CRASH SEVERITY (2013-17)

CRASH SEVERITY	TOTAL CRASHES
Fatal	4
Severe Injury	23
Visible Injury	42
Complaint of Pain	95
Property Damage Only	376
Total	540

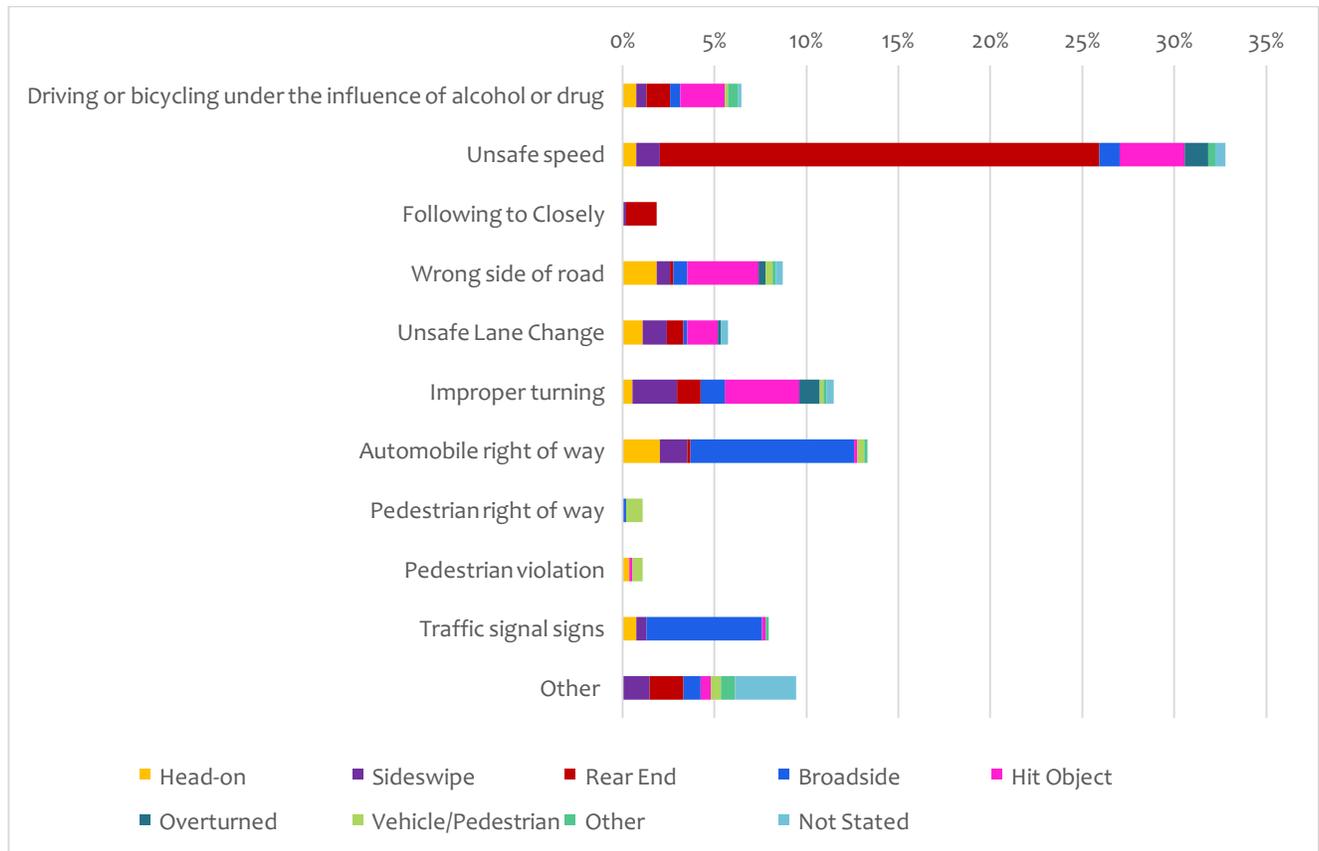
SOURCE: SWITRS, TIMS, AND CITY POLICE DEPARTMENT DATA, 2013-2017.

TABLE 14: FATAL AND SEVERE CRASHES BY MODE OF TRAVEL

ROAD USERS INVOLVED	FATAL	SEVERE INJURY	TOTAL
Pedestrian - Vehicle	1	5	6
Bicycle - Vehicle	2	3	5
Motorcycle - Vehicle	1	5	6
Other Vehicle Collisions	0	10	10
Total	4	23	27

SOURCE: SWITRS, TIMS, AND CITY POLICE DEPARTMENT DATA, 2013-2017.

CHART 4: VIOLATION CATEGORIES BY CRASH SEVERITY



SOURCE: SWITRS, TIMS, AND CITY POLICE DEPARTMENT DATA, 2013-2017.

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3. COMMUNITY INPUT

The city of Oakley conducted two General Plan Update Visioning Workshops and hosted an online survey for community input on various elements. This section describes the community feedback received for the Mobility Element of the General Plan. Visioning Workshop #2 focused on identifying the transportation and mobility issues and concerns in Oakley.

CORE VALUES FOR CIRCULATION ELEMENT UPDATE

As description in the Visioning White Paper, the main theme for the Circulation Element have been identified as:

Mobility: *Cars have traditionally been, and will continue to be a vital part of Oakley's transportation network. Addressing traffic continue to be a priority. However, as the city continues to grow, additional emphasis needs to be placed on alternative ways of getting around, including walking, bicycling, and public transit. Increasing the safety and functionality of the entire circulation system is a high priority for the City.*

PERCEIVED BARRIERS TO MOBILITY

The first activity during Visioning Workshop #2 was a mapping activity that identified mobility barriers in the Planning Area. Workshop participants identified key barriers to mobility that included:

- Congestion in downtown
- Safety concerns, including limited walkways for students near schools
- Limited transit service, including near schools and downtown

LONG-TERM VISION & TOP PRIORITIES

The second activity during Visioning Workshop #2 was a Transportation and Mobility Vision activity which aimed to identify transportation and mobility related priorities. Workshop participants identified the following topics as desirable components that should be included in the city's "transportation vision":

- Transportation safety
- Provision of Active Transportation facilities including bicycle and pedestrian trails connecting major destinations, provision of "complete streets" and a walkable downtown.
- Improved regional connectivity including improved access to BART/eBART and other transit facilities, and encouragement for expanding local transit operated by Tri Delta Transit and/or provision of Trolley/Shuttle services.
- Improved access for all

The third activity during visioning Workshop #2 was a prioritization activity aimed at prioritizing types of mobility improvements. Workshop participants consider transportation safety improvements as the top priority for the future of Oakley's transportation system. Additionally, workshop participants would like to prioritize pedestrian and bicycle improvements.

4. ISSUES AND PRIORITIES

The Focused General Plan Update provides an opportunity to update the Circulation Element for conformance with State legislation adopted in recent years concerning VMT and complete streets, and support related efforts focusing on greenhouse gas emissions. The following policy recommendations that were provided in the Environmental Justice White Paper are also relevant to the Circulation Element:

- As new transportation technologies and mobility services, including autonomous vehicles, electric vehicles, electric bicycles and scooters, and transportation network companies (e.g., Uber and Lyft) are implemented in Oakley and used by the public, the City shall review and update its policies and plans to maximize the benefit to the public of such technologies and services without adversely affecting the City's transportation network. Updates to the City's policies and plans may cover topics such as electric vehicle charging stations, curb space management, changes in parking supply requirements, policies regarding electric scooter use and docking, etc.
- Consider implementing vehicle weight limit restrictions on roadways near sensitive uses like schools and residential neighborhoods to discourage cut-through truck traffic.
- Encourage and support local transit service providers to increase and expand services for people who are transit dependent, including seniors, persons with mobility disabilities, and persons without regular access to automobiles, by improving connections to regional medical facilities, senior centers, and other support systems that serve residents and businesses.
- Review updates to transportation planning documents and any automated vehicle plans to ensure the benefits of automated mobility are equitably distributed across all segments of the community and that the negative impacts of automated mobility are not disproportionately borne on traditionally marginalized neighborhoods.
- As part of the development of or participation in any ridesharing program, including for shared automated vehicle fleets, ensure that the program considers the safety needs of vulnerable populations and loading needs of seniors, families with children, and individuals with mobility impairments.
- Review and update the City's standard plans to ensure that the plans reflect the City's goals and policies for the circulation system, including cross-sections that provide for landscape-separated sidewalks along arterials and non-residential streets, best practices for traffic safety, and accommodate all users.
- Encourage new facilities to be located in areas that are readily accessible by pedestrians and bicyclists and served by transit.

KEY TOPICS FOR CIRCULATION ELEMENT UPDATE

Based on the mobility setting, travel characteristics and community input described in the preceding sections, as well as the items described above, key topics for potential inclusion in the updated Circulation Element include the following:

- **Adoption of Vehicle Miles Traveled Policies.** This could include adoption of goal to reduce VMT on a per capita basis, compared to existing rates of per capita VMT in Oakley, and also aimed at supporting related goals focused on greenhouse gas emissions (GHG) and environmental justice. A VMT policy could also guide the evaluation of

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transportation impacts when changes to CEQA required by SB 375 become effective in July 2020. As described in this report: Oakley's per capita VMT rates are higher than adjacent cities, and higher than countywide and Bay Area averages. VMT goals & policies could also include transportation demand management (TDM) recommendations to support VMT and GHG reductions.

- **VMT Policy Example:** The City shall endeavor to reduce VMT associated with Oakley's existing development and future growth by 15%.
- **VMT Implementation Measure Example:**
 - Future projects may demonstrate consistency with the 15% reduction goal through: 1) implementation of the TDM measures provided in the General Plan, 2) a project-based analysis that demonstrates a 15% reduction in existing VMT for the proposed land use(s), or 3) alternative methodology based on a regional plan or threshold (e.g., demonstration of consistency with a CCTA standard (if adopted in the future) that is supported by a CEQA analysis that the standard would achieve a less than significant impact associated with VMT.
 - Projects assumed to be consistent with the 15% reduction and not require further analysis include:
 - Small projects that generate or attract less than 110 daily trips (OPR Technical Advisory, p. 12).
 - Land use projects proposed within ½-mile of an existing major transit stop or along an existing high quality transit corridor (CEQA Guidelines Section 15064.3).

Discussion: OPR's Technical Advisory identifies that the criteria for determining the significance of transportation impacts must promote: (1) reduction of greenhouse gas emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses.

OPR recommends a per capita or per employee VMT that is 15% below that of existing development may be a reasonable threshold, providing documentation that a 15% reduction is consistent with achieving the State's climate goals.

The analysis prepared for the CEQA documentation for the General Plan Update will 1) further review existing and future VMT to determine the level of reduction associated with the City's planned land uses, and 2) review potential mechanisms to reduce VMT to ensure that feasible tools are available to assist projects in achieving a 15% reduction, or other level of reduction if an alternative goal is recommended and supported by the CEQA documentation. It is noted MTC's projection of VMT anticipates that Citywide VMT will be reduced from 23.0 (2020) to 21.3 (2040) as shown in Table 9. This projected reduction in VMT is a 7.4% reduction, so additional measures will be necessary to achieve a 15% reduction.

Based on OPR's Technical Advisory and State law, the following project types may be assumed to have a less-than-significant impact:

- *Small projects that generate or attract less than 110 daily trips (OPR Technical Advisory, p. 12).*
- *Land use projects proposed within ½-mile of an existing major transit stop or along an existing high quality transit corridor (CEQA Guidelines Section 15064.3).*

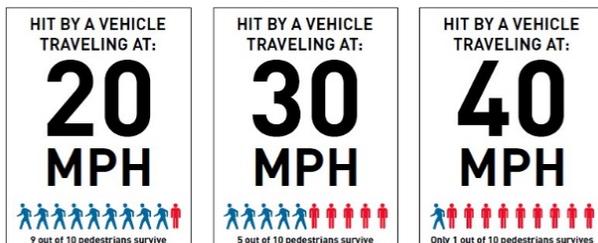
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“Major transit stop’ means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. An “existing major transit stop” may include a planned and funded stop that is included in an adopted regional transportation improvement program.

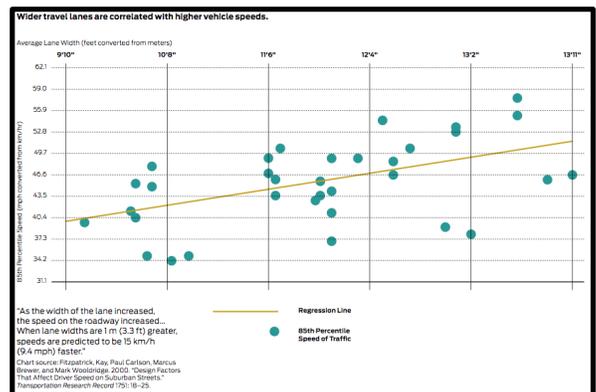
“High-quality transit corridor” means an existing corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. For the purposes of this Appendix, an “existing stop along a high-quality transit corridor” may include a planned and funded stop that is included in an adopted regional transportation improvement program. Unless more specifically defined by an air district, city or county, “high-volume roadway” means freeways, highways, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.

It is noted that CCTA is in the process of developing regional VMT data and strategies. In order to provide flexibility for future development and roadway projects, it may be advisable for policy language addressing VMT to determine that a project may address VMT based on the future adopted CCTA thresholds or by achieving the 15% reduction addressed through the General Plan.

- Refinements to the City’s Roadway Policies to Include Complete Streets Components.** This could include modifying Goal 3.1 Roadways (“Provide an efficient and balanced transportation system”) and accompanying policies to include complete streets components. Currently, the policies and programs that accompany Goal 3.1 primarily focus on motorized vehicle travel. The updated policies could be refined to better match the goal of creating a balanced transportation system.
- Refinements to Safety Goals & Policies.** This could include consideration of adopting a “vision zero” goal that would aim to eliminate fatalities attributable to collisions. Street design guidelines tailored towards city streets often aim to encourage speeds not to exceed 35 miles per hour (mph), while speeds of 20 to 25 mph are desirable in many cases. Street design guidelines tailored towards city streets often aim to encourage speeds not to exceed 35 mph, while speeds of 20 to 25 mph are desirable in many cases. Travel lane width affects travel speeds. Travel lane width affects average speeds; thus refinements to safety goals could be accompanied by changes to street design guidelines and standards described in the Circulation Element.



Speed is especially lethal for vulnerable users like pedestrians and people biking. The risk of injury and death increases as speed increases.



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- **Adoption of a Bikeway Network Map as part of the General Plan update.** Such a map is often developed as part of a Bicycle Master Plan and typically becomes part of the city's adopted transportation system map.

-

- **Policy Updates for Changing Technologies.** This would include updates to policies and plans may cover topics such as electric vehicle charging stations, curb space management, changes in parking supply requirements, policies regarding electric scooter use and docking, and potential future technologies.



- **Revisions to Planned Improvements Described in The Circulation Element.** To support VMT and Complete Streets goals: this should include bicycle, pedestrian and transit improvements (and not be limited to motor vehicle improvements). This could include reconsidering prior plans to widen Main Street to six lanes on some segments, which was a recommendation that pre-dates completion of the Highway 4 by-pass. As described in this report: traffic volumes on Main Street have dropped by over 40 percent on some segments following completion of the Highway 4 By-pass.
- **Potential Updates to Road Design Standards & Performance Measures:** The updated Circulation Element could include potential changes to street design potential changes to typical road sections (currently shown in Figures 3-4 to 3-9 of the Circulation Element) to support successful implementation of the types of policy changes described above. This could also include refinements to performance measures such as LOS goals, particularly to complement complete streets goals and policies.

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FIGURES

FIGURE 1: REGIONAL TRANSPORTATION SETTING

FIGURE 2: ROADWAY SYSTEM MAP

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FIGURE 3: BIKEWAY NETWORK MAP

FIGURE 4: PUBLIC TRANSIT SERVICE MAP

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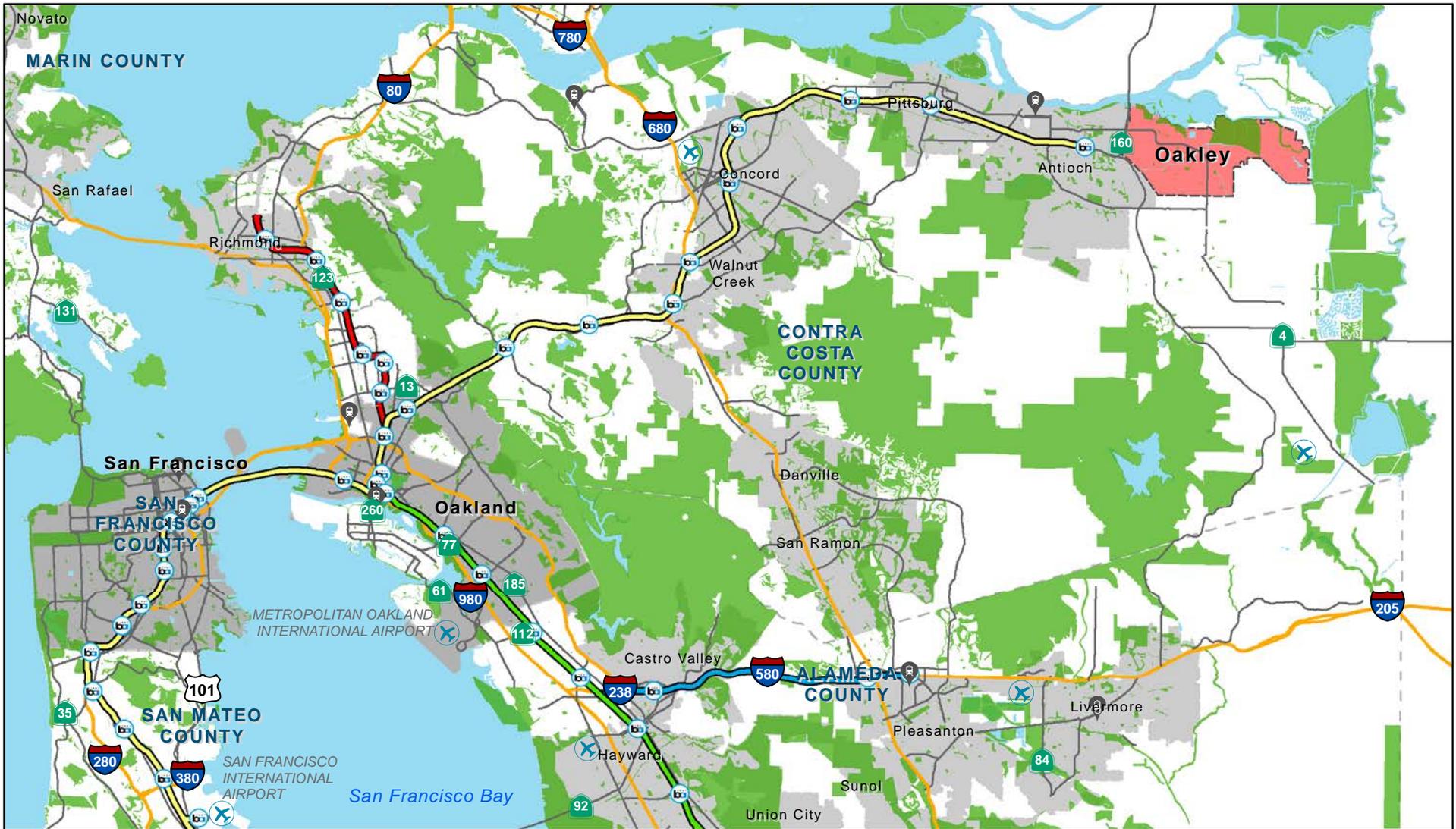
FIGURE 5: TRUCK ROUTE MAP

FIGURE 6: EXISTING DAILY TRAFFIC VOLUMES & LEVEL OF SERVICE

Oakley Focused General Plan Update

FIGURE 7: REPORTED MOTOR VEHICLE COLLISION LOCATIONS

FIGURE 8: LOCATIONS OF COLLISIONS INVOLVING BICYCLISTS OR PEDESTRIANS



LEGEND

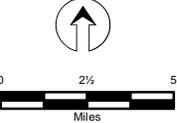
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|---|------------------|---|----------------------------------|---|------------------------------|
|  | City of Oakley |  | Dublin/Pleasanton to Daly City |  | Interstate Highway |
|  | Major Cities |  | Fremont to Daly City |  | Other Freeway and Expressway |
|  | Other Cities |  | Fremont to Richmond |  | BART Stations |
|  | Parks/Open Space |  | Antioch to SFO - Millbrae |  | Public Airports |
|  | Water |  | Richmond to Daly City - Millbrae |  | Amtrak Train/Bus Stations |

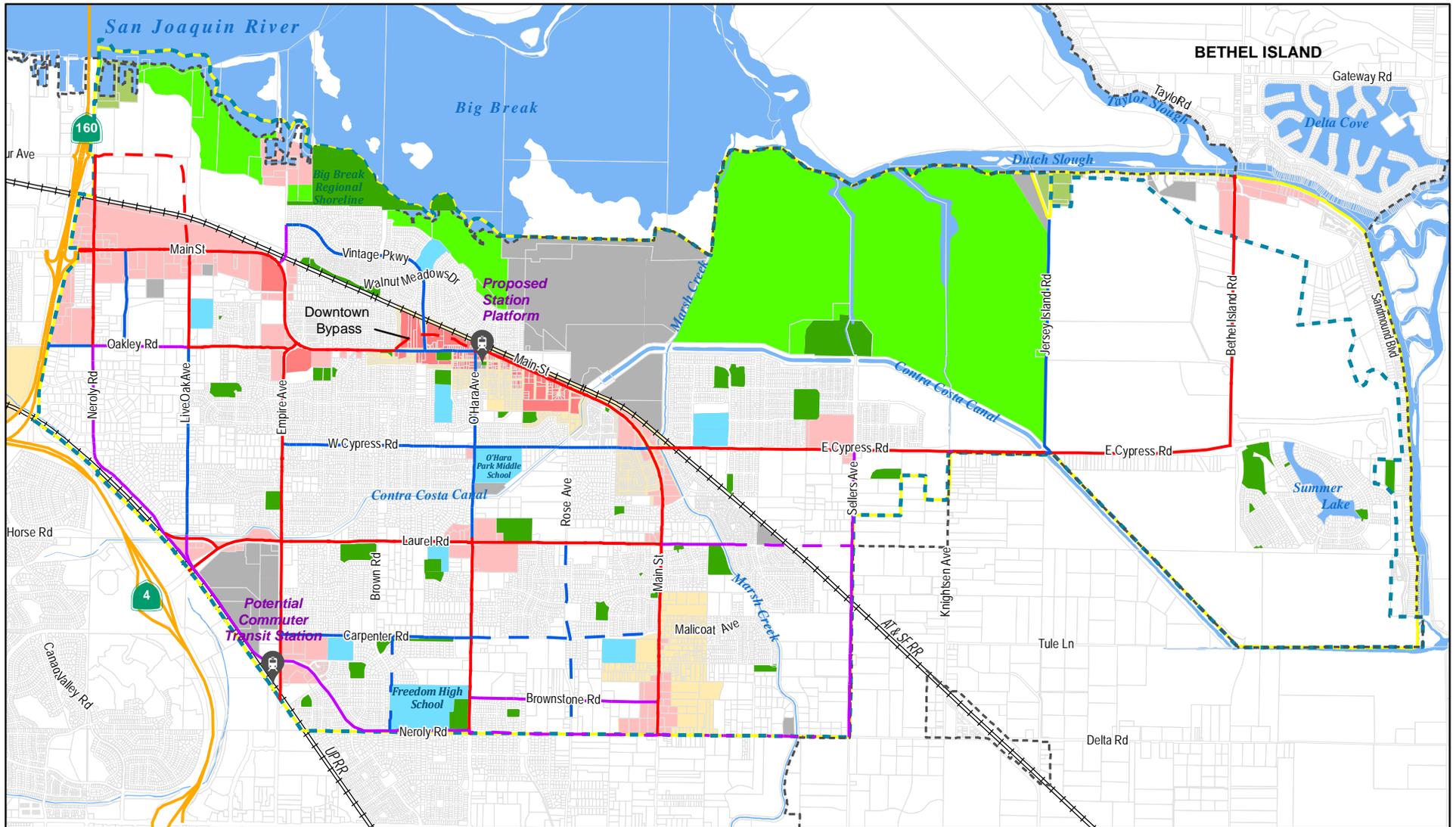
OAKLEY



General Plan

Figure 1
Regional Setting
City of Oakley





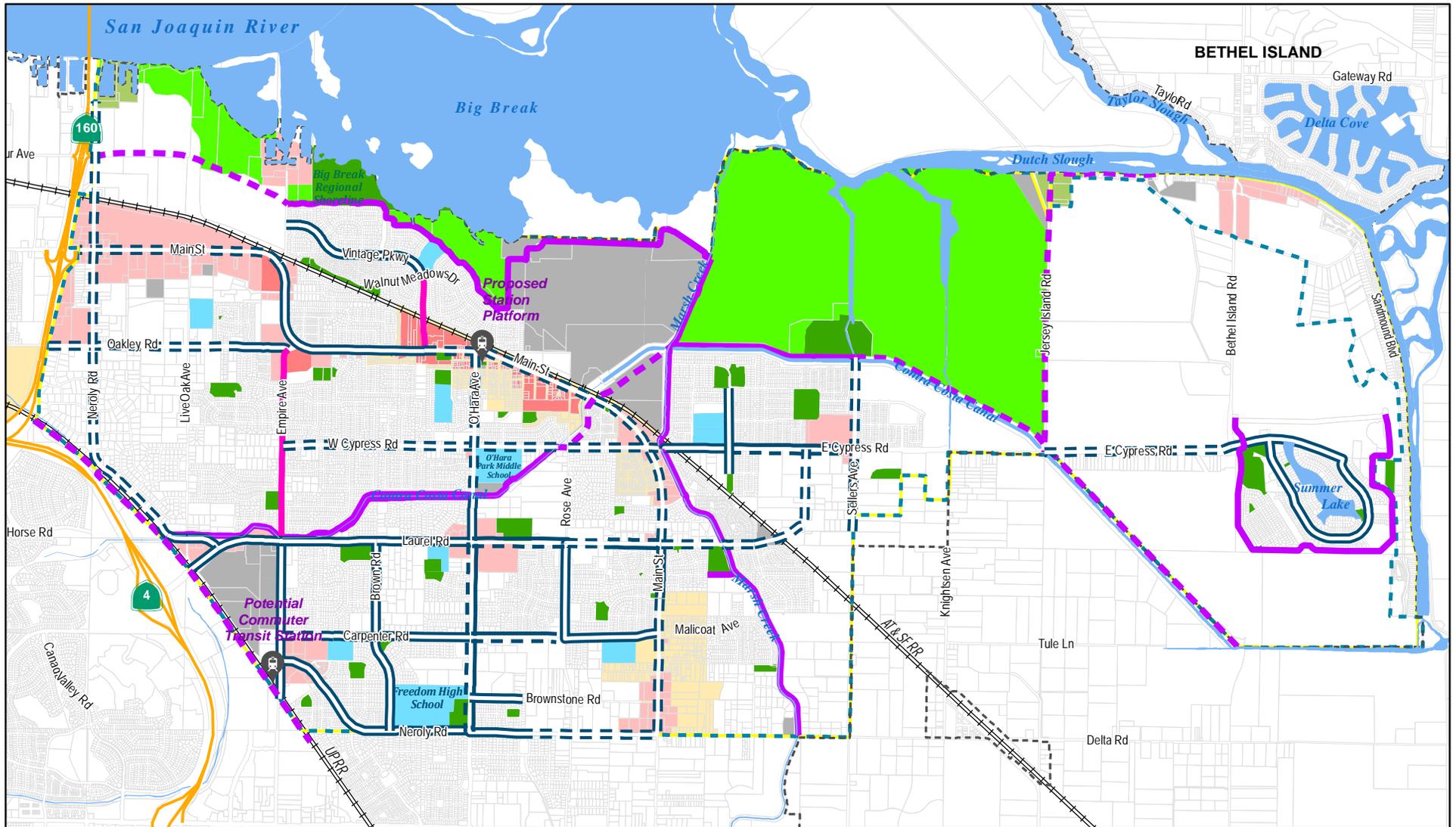
LEGEND

- | | | | | | |
|--|----------------------------|--|---------------------------|--|-------------------------|
| | Oakley City Limit | | Major Arterial | | Proposed Major Arterial |
| | Oakley Sphere of Influence | | Minor Arterial | | Proposed Minor Arterial |
| | Urban Limit Line | | Collector | | Proposed Collector |
| | Parks and Recreation | | Railway Network | | |
| | School | | Pedestrian Priority Areas | | |
| | Shopping Center | | Proposed Train Station | | |

Figure 2
Roadway System
 City of Oakley



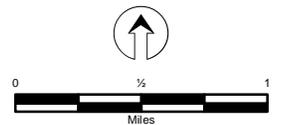
December 10, 2019

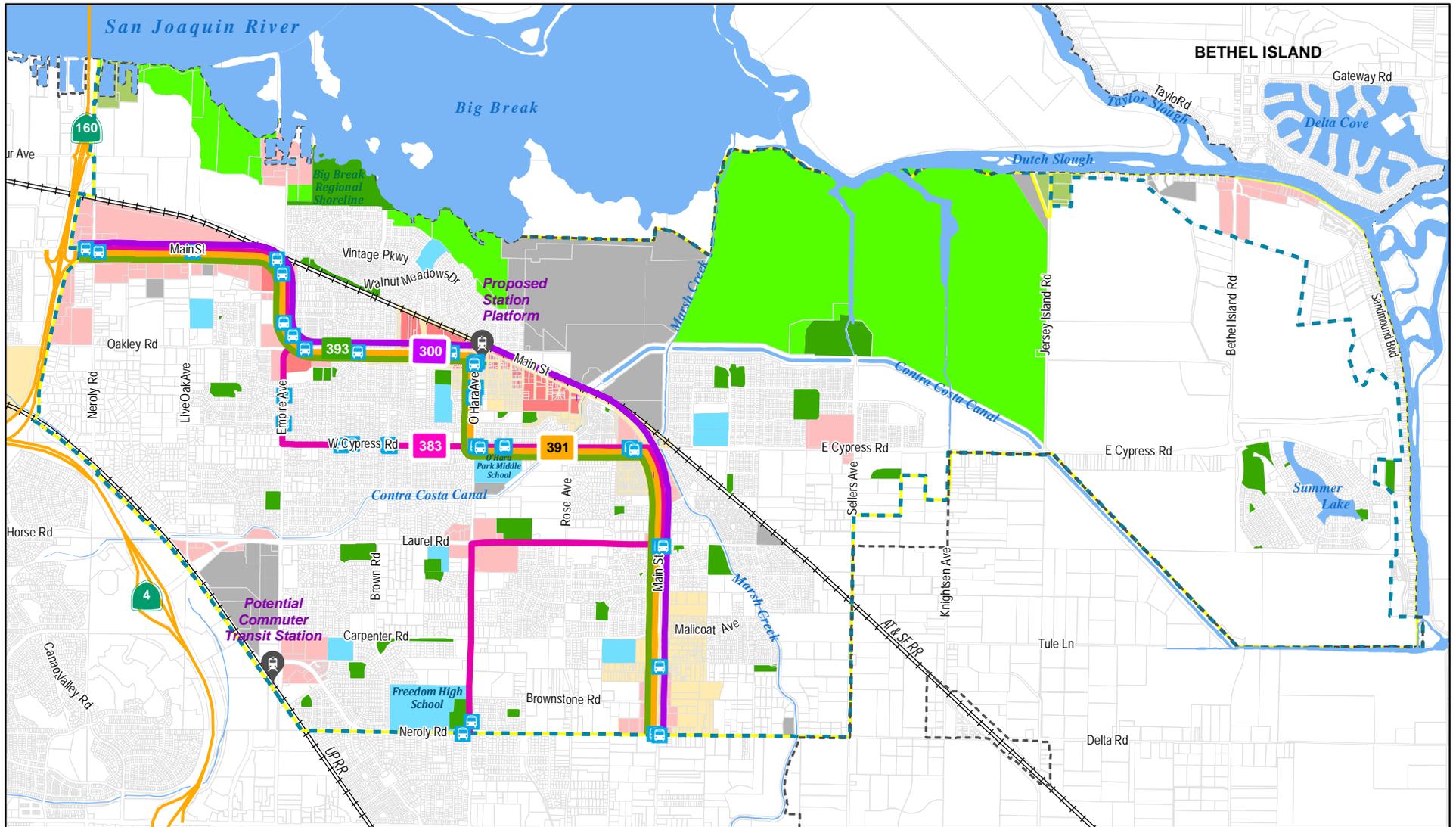


LEGEND

- | | | |
|----------------------------|---------------------------|-----------------------------|
| Oakley City Limit | Class 1 bike path | Proposed Class 1 bike path |
| Oakley Sphere of Influence | Class 2 bike lane | Proposed Class 2 bike lane |
| Urban Limit Line | Class 3 bike route | Proposed Class 3 bike route |
| Parks and Recreation | Railway Network | |
| School | Pedestrian Priority Areas | |
| Shopping Center | Proposed Train Station | |

Figure 3
 Bikeway Network
 City of Oakley



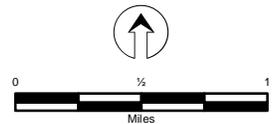


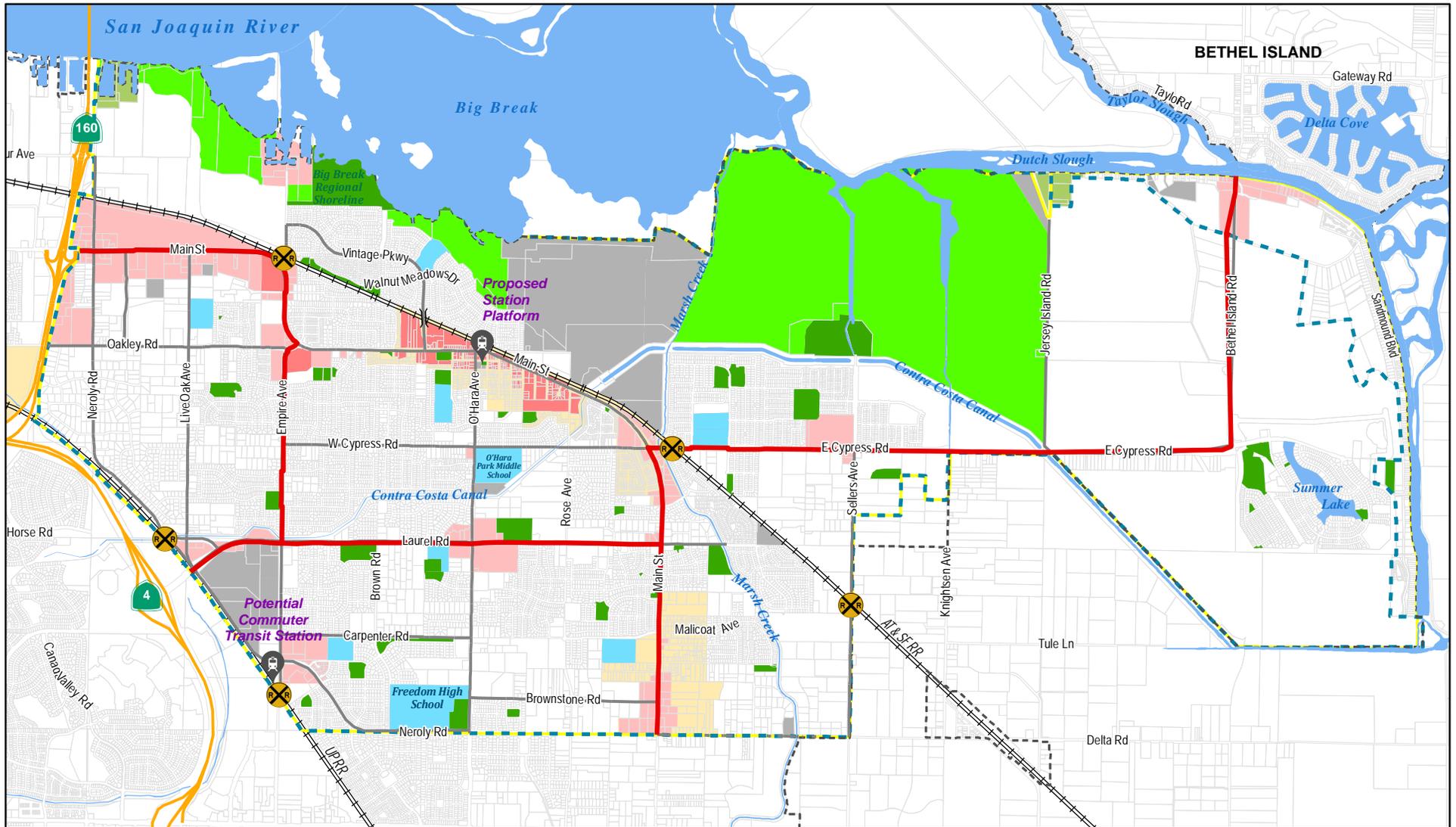
LEGEND

- Oakley City Limit
- Oakley Sphere of Influence
- Urban Limit Line
- Parks and Recreation
- School
- Shopping Center
- Railway Network
- Pedestrian Priority
- Proposed Train Station
- Bus Stops
- 300 Antioch BART/Brentwood (Weekdays Only/Commute Hours)
- 383 Antioch/Brentwood (Weekdays Only)
- 391 Pittsburg Center BART/Brentwood Park & Ride (Weekdays Only)
- 393 Antioch BART / Brentwood Park & Ride (Sat. Sun. & Holidays Only)

OAKLEY
General Plan

Figure 4
Transit System
City of Oakley



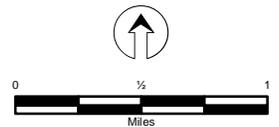


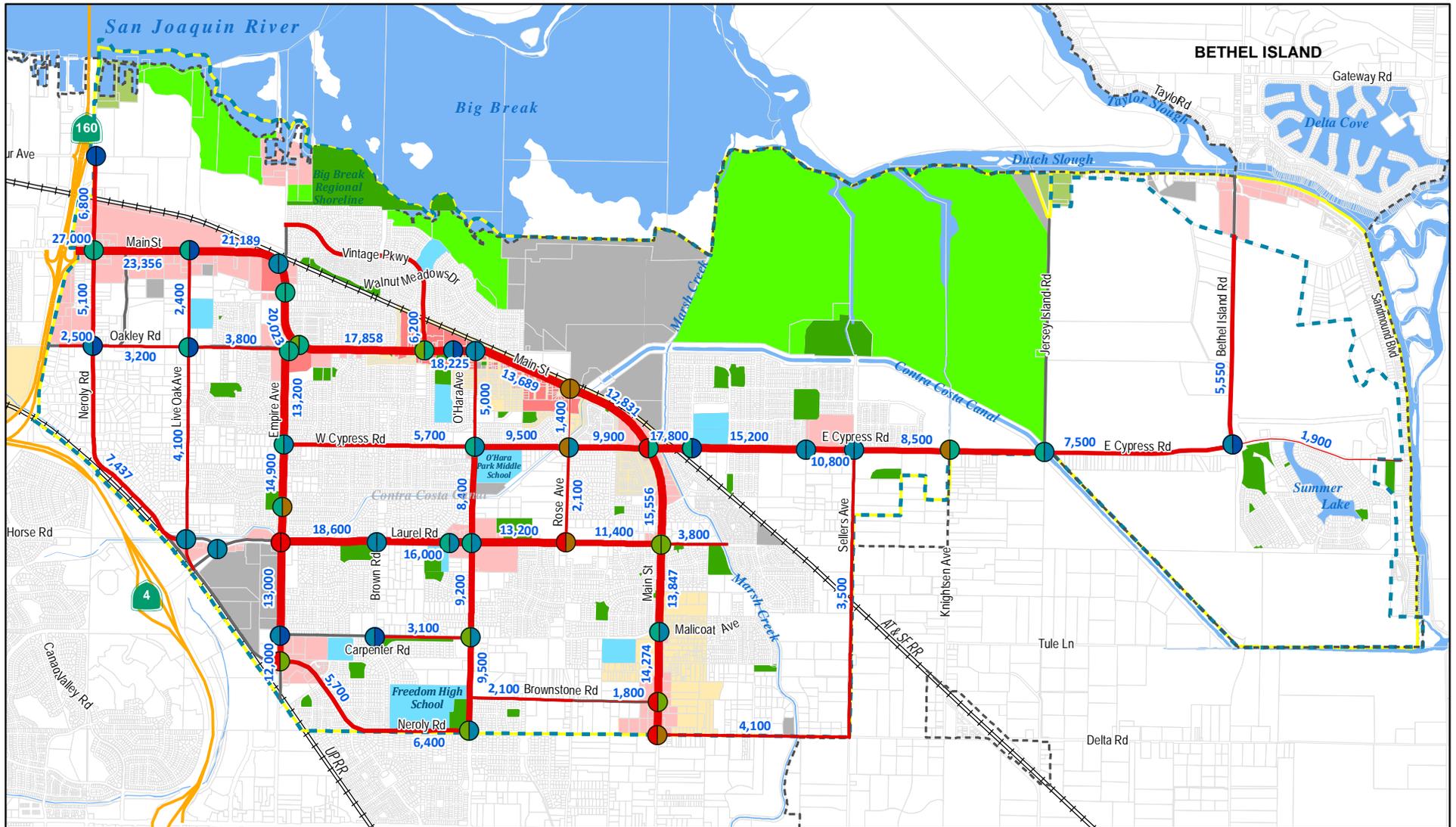
LEGEND

-  Oakley City Limit
-  Oakley Sphere of Influence
-  Urban Limit Line
-  Parks and Recreation
-  School
-  Shopping Center
-  Truck Routes
-  Railway Network
-  Pedestrian Priority Areas
-  Proposed Train Station
-  At-Grade Railroad Crossing
-  Overpass Railroad Crossing

OAKLEY
General Plan

Figure 5
Truck Routes
City of Oakley





LEGEND

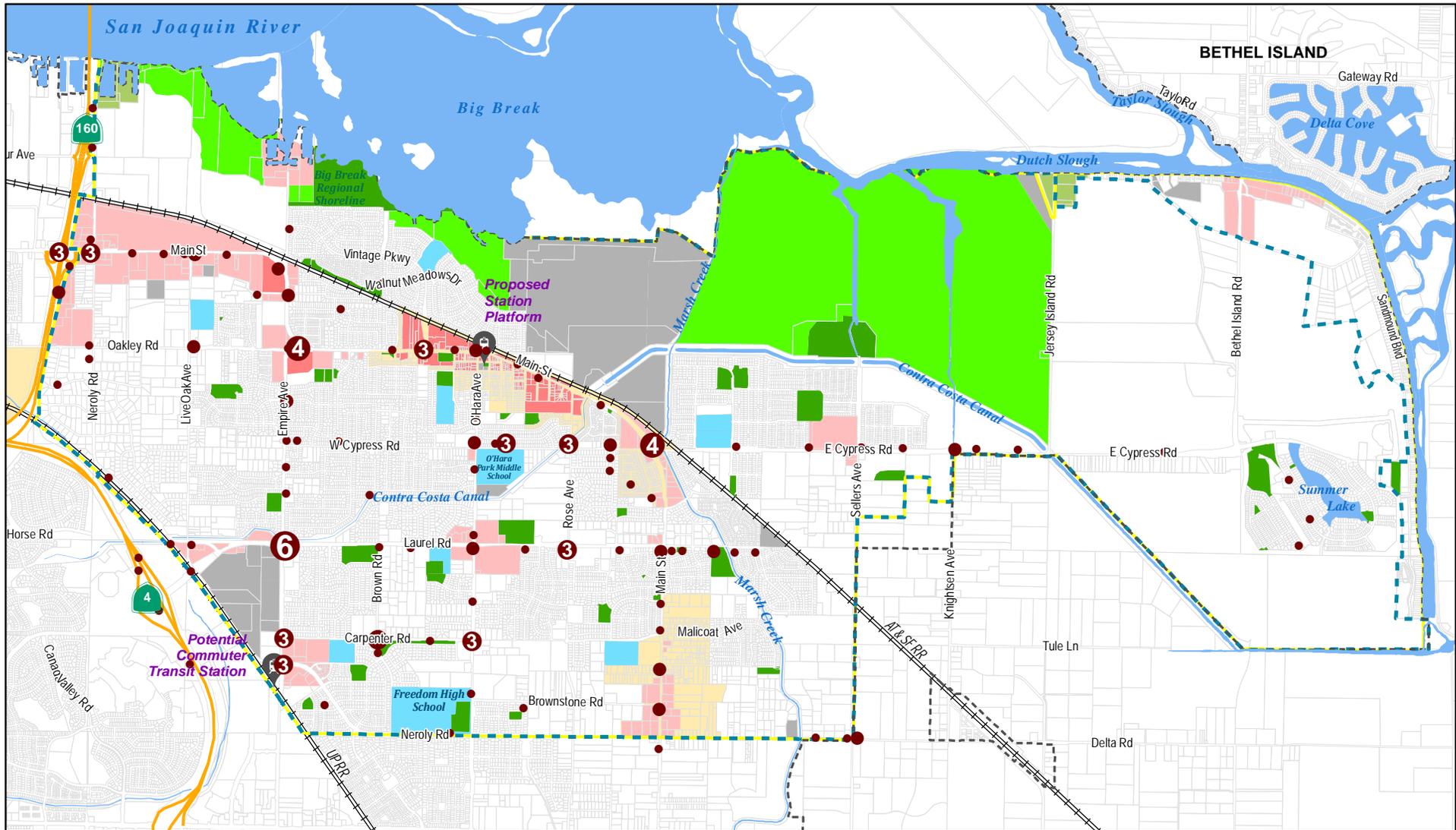
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|--|----------------------------|--|--------------------|--|-------|--|--------|
| | Oakley City Limit | | Below 2000 | | LOS A | | LOS AM |
| | Oakley Sphere of Influence | | 2,001 - 5000 | | LOS B | | LOS PM |
| | Urban Limit Line | | 5,001 - 8000 | | LOS C | | |
| | Parks and Recreation | | 8,001 - 12,500 | | LOS D | | |
| | School | | 12,501 and above | | LOS E | | |
| | Shopping Center | | Data not available | | LOS F | | |

Figure 6
Existing Daily Traffic Volumes & Traffic
Level of Service (LOS)

City of Oakley



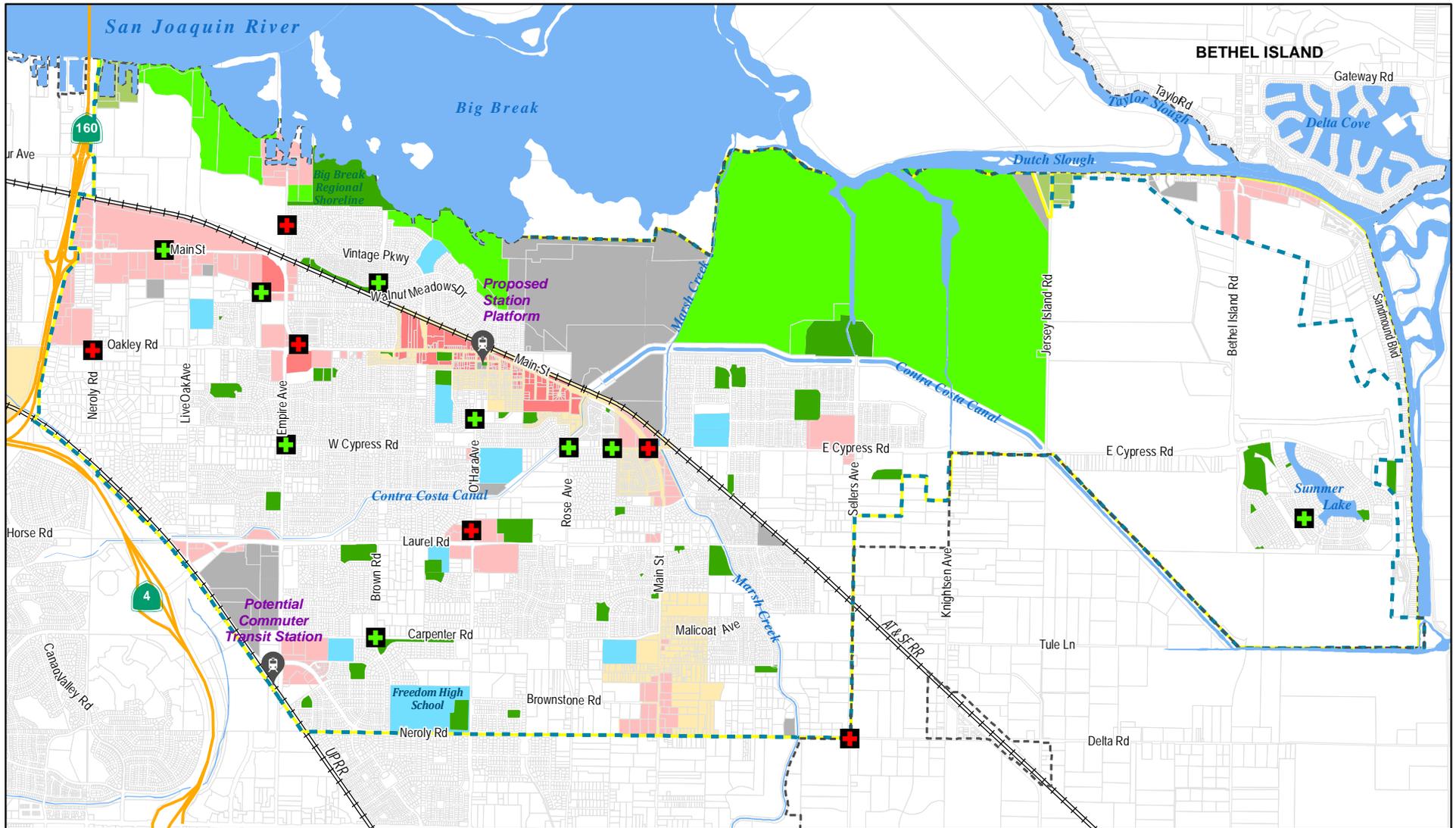
December 10, 2019



- LEGEND**
- Oakley City Limit
 - Oakley Sphere of Influence
 - Urban Limit Line
 - Parks and Recreation
 - School
 - Shopping Center
 - Railway Network
 - Pedestrian Priority Areas
 - Proposed Train Station
 - Number of vehicle Collisions

Figure 7
Reported Motor Vehicle Collisions
(2013-17)
City of Oakley





- LEGEND**
- Oakley City Limit
 - Oakley Sphere of Influence
 - Urban Limit Line
 - Parks and Recreation
 - School
 - Shopping Center
 - Bicycle Crashes
 - Pedestrian Crashes
 - Railway Network
 - Pedestrian Priority Areas
 - Proposed Train Station

Figure 8
Reported Bicycle and Pedestrian Collisions
(2013-17)
City of Oakley

