

Final Report

# Parkade Area Circulation Study

for the:

**Town of Fairfax**

Prepared by:

**Whitlock & Weinberger Transportation, Inc.**

In Partnership with:

**Alta Planning + Design**



July 2010

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**Town of Fairfax,  
Planning Department**

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## Acknowledgments

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The Technical Advisory Committee for the *Fairfax to San Rafael Cross Marin Bikeway Feasibility Study* provided review and oversight of the project.

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## Introduction and Background

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### Introduction

This report presents an analysis of transportation issues in and around the Fairfax Parkade, a parking area and small plaza bounded by Broadway, Sir Francis Drake Boulevard, Claus Drive and Pacheco Avenue. The purpose of the study was to examine ways to improve bicycle, pedestrian, and vehicular circulation and safety around the Parkade in Downtown Fairfax.

Specifically, the study focuses on measures that can be implemented in the short-term to improve pedestrian and bicycle infrastructure and safety, disabled access, and transit access; to complete the Fairfax to San Rafael Cross Marin Bikeway through downtown; to maintain and/or increase parking supplies; improve motor vehicle circulation where possible; and to connect land uses on the north side of Sir Francis Drake Boulevard with those south of the Boulevard.

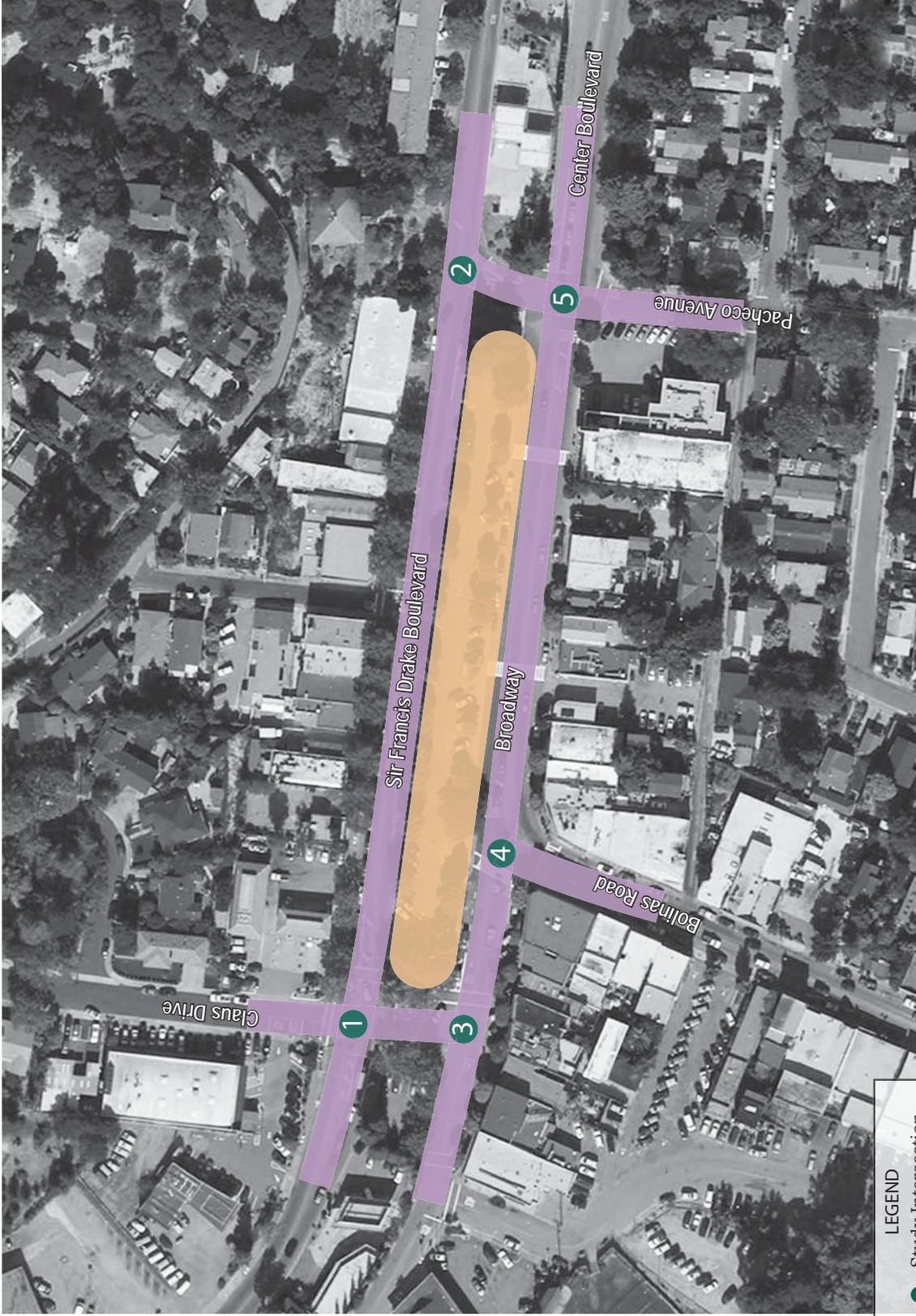
This study is a component of the Non-Motorized Transportation Pilot Program (NTPP), a federally funded pilot program created to demonstrate “the extent to which bicycling and walking can carry a significant part of the transportation load, and represent a major portion of the transportation solution, within selected communities.” The study is based on information provided by the Town of Fairfax, the Fairfax General Plan Advisory Committee (GPAC), Fairfax to San Rafael Cross Marin Bikeway Technical Advisory Committee, Marin Transit, and citizen input.

### Process

This Study was initiated through the NTPP at the request of the Fairfax Town Council. The Study was developed in 2009/10 on a concurrent schedule with the Fairfax to San Rafael Cross Marin Bikeway Feasibility Study. Whitlock & Weinberger Transportation, Inc. (W-Trans) led the development of this Study, working with Town staff, and with input and direction from the Town’s GPAC and the Fairfax to San Rafael Cross Marin Bikeway Feasibility Study Technical Advisory Committee. Public outreach for the effort was performed as a component of public workshops conducted for the NTPP and the *Fairfax to San Rafael Cross Marin Bikeway Feasibility Study*.

### Setting

The Parkade covers nearly three-quarters of an acre and is a significant feature in downtown Fairfax. With its central location, supply of parking, and transit amenities, the Parkade is a hub of activity for residents and visitors. The Fairfax Parkade and the larger study area are depicted in Figure 1. The Parkade is visible to travelers passing through the Town on Sir Francis Drake Boulevard and Broadway. According to the Town’s 2009 draft *Town Center Element of the General Plan* update, “vehicle circulation and parking in downtown Fairfax currently work fairly well, however, the community agrees that the best use of the center of Town is for people to meet and enjoy themselves, and that traffic and parking should be arranged to avoid conflict with this experience.” Challenges to this ‘experience’ include beautifying the Parkade, maximizing parking opportunities for vehicles and bicycles, linking the businesses on Sir Francis Drake Boulevard and Broadway, and improving bicycle and pedestrian access and circulation in and around the Parkade.



North  
North to Scale

## History

The area now called Fairfax was originally part of the Mexican Land Grant, Canada de Herrera, consisting of 6,658 acres in west Marin. European settlers arrived in the area in the 1850's, and development of the Fairfax District around the turn of the twentieth century laid the foundation for the Town as it exists today. Fairfax was incorporated as a Town in 1931.

Early development patterns in Fairfax centered around various land tracts and subdivisions, and the North Pacific Coast Railroad which opened in the 1870's and linked San Francisco with Marin and Sonoma Counties. Fairfax was one of the many stations on "the railroad to the redwoods" which extended between Sausalito and Cazadero. Scheduled service on the line popularized trips to the North Bay, including Fairfax Park in Marin.

In 1904, one of the nation's first electric interurban rail lines was built throughout suburban Marin. In 1907, all of Marin's inter-city railroads were incorporated into the Northwestern Pacific Railroad, which operated between San Francisco and Eureka. The Parkade occupies the site of the former Fairfax Station.



Historical photo of Fairfax in the 1930's, courtesy of the Fairfax Historical Society.

## Existing Conditions

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### Study Area

The project study area, shown in Figure 1, consists of the Parkade parking area bounded by Broadway, Sir Francis Drake Boulevard, Claus Drive and Pacheco Avenue in downtown Fairfax. For the purpose of this study the segment of roadway that extends between Sir Francis Drake Boulevard and Broadway bordering the west end of the Parkade is referred to as Claus Drive. Following is a summary of the transportation system in the study area.

### Study Roadways

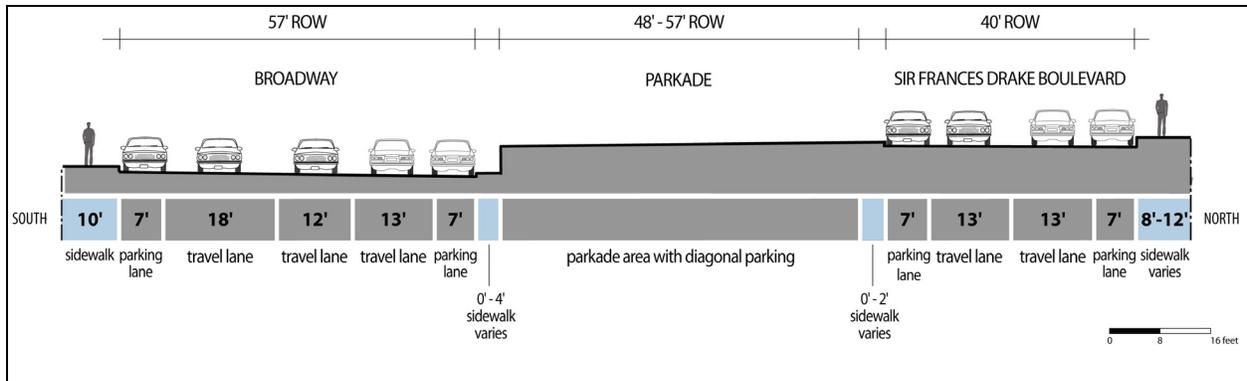
*Sir Francis Drake Boulevard (SFDB)* is a regional arterial that provides intra-county connectivity, extending from the US 101 corridor in Larkspur through central Marin to the Shoreline Highway (SR 1) in west Marin. In the study area, Sir Francis Drake Boulevard has a curb-to-curb width of approximately 40 feet, with two 13-foot travel lanes, on-street parking on both sides of the street, and variable width sidewalk.

*Broadway* is an arterial roadway that extends from Center Boulevard west to its intersection with Sir Francis Drake Boulevard near the Fairfax Library. Broadway is Fairfax's "main street" between Center Boulevard and Bank Street, which is located just west of the study area. Within the study area, Broadway has three travel lanes, two westbound and one eastbound, along with on-street parking on both sides of the street.

*Pacheco Avenue* is a collector/local roadway with two travel lanes that extends south from Sir Francis Drake Boulevard. South of Broadway, Pacheco Avenue provides access to residential neighborhoods. Within the study area, Pacheco Avenue forms a short connector between Broadway and Sir Francis Drake Boulevard, extending for approximately 60 feet between the two corridors. The segment includes two travel lanes in each direction and a planted median. No sidewalks are provided.

*Claus Drive* is a collector/local roadway with two travel lanes that extends between Sir Francis Drake Boulevard and Broadway in the study area. Claus Drive provides access to residential areas north of Sir Francis Drake Boulevard. Within the study area, Claus Drive forms a short connector between Broadway and Sir Francis Drake Boulevard, extending for approximately 60 feet between the two corridors. The segment includes two travel lanes in the northbound direction and a single lane in the southbound direction. No sidewalks are provided.

The combined Broadway-Parkade-Sir Francis Drake Boulevard cross-section is shown in Plate 1. Combined curb-to-curb widths for the three rights-of-way total approximately 154 feet; however, the Parkade right-of-way narrows at the eastern end.



**Plate I – Broadway-Parkade-Sir Francis Drake Boulevard Existing Conditions Cross-Section**

**Study Intersections**

*Sir Francis Drake Boulevard/Claus Drive* is a four-legged intersection controlled by a traffic signal with protected left-turn phasing on the Sir Francis Drake Boulevard approaches, while the Claus Drive approaches have permitted left-turn phasing (no left-turn arrows).

*Sir Francis Drake Boulevard/Pacheco Avenue* is a “tee” intersection with a stop sign on the northbound Pacheco Avenue approach to Sir Francis Drake Boulevard.

*Broadway/Claus Drive* is a “tee” intersection with stop controls on both the eastbound and westbound Broadway approaches. Turning movements from southbound Claus Drive onto Broadway are uncontrolled. It should be noted that this type of traffic control is unusual in that tee intersections generally have stop control on the terminating leg.

*Broadway/Bolinas Road* is an all-way stop controlled “tee” intersection.

*Broadway/Pacheco Avenue* is a four-legged all-way stop controlled intersection.

Intersection lane configurations for the study intersections are identified in Figure 2.

Existing traffic volumes, which are summarized in Figure 3, were obtained in 2007 for the City’s *Circulation Element Update* (Crane Transportation Group). Based on these traffic volumes, all study intersections are operating acceptably at LOS D or better during both the a.m. and p.m. peak periods. The Level of Service results are summarized in Table I, and copies of the calculations are provided in Appendix A.



North  
 Not to Scale

LEGEND  
 ● Study Intersection

**Parkade Study**  
**Town of Fairfax**

**Figure 2**  
**Lane Configurations**



**Table I**  
**Summary of Existing Intersection Level of Service Calculations**

Study Intersection Approach	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
1. Sir Francis Drake Blvd/Claus Dr	16.4	B	20.9	C
2. Sir Francis Drake Blvd/Pacheco Ave	2.8	A	4.1	A
<i>Northbound (Pacheco Ave) Approach</i>	<i>18.9</i>	<i>C</i>	<i>29.1</i>	<i>D</i>
<i>Westbound (Sir Francis Drake) Approach</i>	<i>9.8</i>	<i>A</i>	<i>8.9</i>	<i>A</i>
3. Broadway Blvd/Claus Dr	13.8	B	12.4	B
<i>Eastbound (Broadway Blvd) Approach</i>	<i>21.0</i>	<i>C</i>	<i>17.5</i>	<i>C</i>
<i>Westbound (Broadway Blvd) Approach</i>	<i>11.9</i>	<i>B</i>	<i>12.1</i>	<i>B</i>
4. Broadway Blvd/Bolinas Rd	15.5	C	15.4	C
5. Center Blvd/Pacheco Ave	14.8	B	29.2	D

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service  
 Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

**Circulation Overview**

Sir Francis Drake Boulevard, Center Boulevard (which becomes Broadway west of Pacheco), Broadway and Bolinas Road are the major roads to and through Fairfax. All other streets in Fairfax are local streets which provide access to residences and neighborhood functions. In the study area, Sir Francis Drake Boulevard and Broadway run parallel to each other and comprise the visual face of downtown Fairfax. Generally, Sir Francis Drake Boulevard carries through traffic between the US 101 corridor and west Marin, while Broadway carries local traffic and provides access to downtown destinations.

According to the Town’s 2009 draft *Town Center Element*, “vehicle circulation in downtown Fairfax currently works fairly well.” However, morning and evening peak hour congestion is common. Movements from Sir Francis Drake Boulevard to southbound Claus Drive and then eastbound or westbound Broadway can be difficult. Drivers, bicyclists, and pedestrians on Broadway regularly experience delay associated with the Broadway/Claus Drive intersection, which in turn impacts operation at Broadway/Bolinas Road due to the close proximity; the intersections are located approximately 100 feet apart. Further, parked vehicles often violate timed parking restrictions on the north side of Broadway between the two intersections, blocking the westbound right-turn lane from Broadway onto northbound Claus Drive.

*Truck Traffic* – Freight and delivery trucks access the study area to make deliveries to downtown businesses. Designated loading zones are provided on Broadway in front of businesses on the south side of the street immediately east and west of Bolinas Road. Truck deliveries also take place on Sir Francis Drake Boulevard in front of businesses located on the north side of the street.

*Parkade Circulation* – Circulation within the Parkade is provided via a one-way eastbound center drive aisle. Access into the Parkade is provided via a driveway entrance from Sir Francis Drake Boulevard located adjacent to Claus Drive. Vehicles enter the Parkade either by making a left-turn in from the pocket on westbound Sir Francis Drake Boulevard to southbound Claus Drive, or via a right-turn from eastbound Sir

Francis Drake Boulevard. Vehicles exit the Parkade at the east end via a right-turn only to westbound Broadway, just west of Pacheco Avenue.

## Parking

On-street parking in the study area is provided along Sir Francis Drake Boulevard and Broadway. On-street parking is also available outside of the study area on surrounding downtown streets. Off-street parking is provided in the Parkade, along with a limited number of spaces that are provided in private lots located adjacent to or behind businesses.

According to staff and public input, parking demand in the study area is greatest during the evening and on weekends. Parking enforcement is provided on a daily basis by the Fairfax Police Department.



View of the Parkade parking area looking east down the center drive aisle.

Observations indicate there are inefficiencies in on-street parking layouts in the study area. Individual spaces measure approximately 20 feet long and are marked by parking tees; however, adjacent spaces are typically separated by gaps of three feet or more. Standard parallel parking stalls typically measure 22 feet long, therefore, re-striping of on-street parking spaces could yield additional vehicle spaces, or space for on-street bicycle parking which would free sidewalk space for street furnishings or other uses. Available parking supplies are described in greater detail below.

*Sir Francis Drake Boulevard On-Street Parking* – Timed, two-hour on-street parking is provided on Sir Francis Drake Boulevard along both sides of the street between Claus Drive and Pacheco Avenue. Twelve spaces are provided on the north side of the street, seven between Pacheco Avenue and Taylor Drive, and five between Taylor Drive and Claus Drive. Ten spaces are provided on the south side of the street, five between Claus Drive and Taylor Drive, and five between Taylor Drive and Pacheco Avenue. The five spaces on the south side of the street east of Taylor Drive are not user friendly since there is not an accessible sidewalk along the Parkade frontage for use by passengers and drivers exit into arterial traffic.

*Broadway On-Street Parking* – Timed two-hour on-street parking is provided along both sides of on Broadway between Claus Drive and Pacheco Avenue. Six spaces are provided opposite the theatre on the north side of Broadway along the Parkade frontage. Two timed spaces, with no parking restrictions in place during p.m. commute hours, are provided on the north side of the street between Bolinas Road and Claus Drive. On the south side of Broadway six spaces are provided between the theatre and the driveway to Peri's. Four more spaces are provided between Peri's and Bolinas Road. A loading zone and three diagonal spaces are provided between Bolinas Road and Claus Drive.

*Parkade Parking Area* – Measurement of the Parkade indicates that it covers approximately 0.75 acres. Approximately 79 public parking spaces are provided in the Parkade. The parking area is configured with a one-way eastbound center drive aisle that provides access to pockets of angled parking spaces along with several parallel spaces opposite the diagonal spaces along the eastern end of the facility.

Amenities in the Parkade include a small wooden gazebo transit shelter along the Sir Francis Drake Boulevard frontage, roughly across from Perry's Deli, trash and recycling receptacles, and bicycle racks for short-term bike parking. Parking restrictions are posted in the Parkade; four-hour parking is enforced

between 9:00 a.m. and 6:00 p.m. daily except holidays, and no parking is permitted between the hours of 2:00 a.m. and 6:00 a.m. Parking activity in the Parkade is generally considered to be heaviest at night, when parking use is associated with downtown restaurants, cafes, bars, and the movie theatre. Parking in the Parkade is also heavily utilized on weekends as it typically serves as a staging area for bicyclists and other groups that are headed into west Marin for recreation activities.



**Bicycle Parking** – Bicycle racks are provided for short term bicycle parking in several locations within the Parkade (adjacent to the transit shelter and the pedestrian entrance opposite Taylor Street), as well as along the sidewalks in front of businesses on Sir Francis Drake Boulevard and Broadway, including four in front of the theatre on Broadway.

## Transit

The Parkade is the hub of transit activity in downtown Fairfax. Transit stops are located along the north and south side of the Parkade on Sir Francis Drake Boulevard and Broadway respectively. Fixed route public transit lines serving the area include the West Marin Stage, local and school routes coordinated by Marin Transit, and regional routes operated by Golden Gate Transit. Transit serves the Parkade seven days a week and generally runs between the hours of 6:00 a.m. and 11:00 p.m. A small wooden gazebo style transit shelter is provided along the northern edge of the Parkade for eastbound riders. The shelter faces Sir Francis Drake Boulevard and is located mid-block between Claus and Taylor Drives. The shelter includes covered seating. Short-term bicycle parking (three “U” racks that accommodate up to six bicycles), news racks, and trash and recycling receptacles are situated adjacent to the shelter. A striped bus zone is provided on Sir Francis Drake Boulevard which allows one to two busses to pull over out of the travel lane and load or off-load passengers. A bus stop is also provided along Broadway on the south side of the Parkade immediately east of Bolinas Road that serves westbound bus routes. Busses pull over to load and off-load in the wide curb lane. No shelter or seating is provided; however, trash and recycling receptacles are located along the sidewalk. Transit routes serving the Parkade are described in greater detail below.



The shelter faces Sir Francis Drake Boulevard and is located mid-block between Claus and Taylor Drives. The shelter includes covered seating. Short-term bicycle parking (three “U” racks that accommodate up to six bicycles), news racks, and trash and recycling receptacles are situated adjacent to the shelter. A striped bus zone is provided on Sir Francis Drake Boulevard which allows one to two busses to pull over out of the travel lane and load or off-load passengers. A bus stop is also provided along Broadway on the south side of the Parkade immediately east of Bolinas Road that serves westbound bus routes. Busses pull over to load and off-load in the wide curb lane. No shelter or seating is provided; however, trash and recycling receptacles are located along the sidewalk. Transit routes serving the Parkade are described in greater detail below.

**Golden Gate Transit Route 23 (Local)** – This route provides weekday and weekend service to San Rafael, San Anselmo, Fairfax, and Manor. Route 23 operates with approximately thirty-minute headways.

**Golden Gate Transit Route 24 (Regional)** – This route provides weekday service to Lagunitas, Woodacre, Manor, San Anselmo, Ross, Kentfield, College of Marin, Greenbrae, and San Francisco. Route 24 operates with approximately thirty-minute headways.

**West Marin Stage Route 68 (Local)** – This route provides weekday and weekend service to Inverness, Point Reyes, Olema, Lagunitas, Forest Knolls, San Geronimo, Woodacre, Fairfax, San Anselmo, San Rafael, and connecting routes out of the San Rafael Transit Center. Route 68 operates five times daily with approximately three-hour headways.

**Marin Transit Route 125 (Local)** – This route provides weekday school service along the Sir Francis Drake Boulevard corridor between Lagunitas and San Rafael with stops at Drake High School, in Fairfax, San

Anselmo, Manor, Woodacre, and Lagunitas. Route 125 operates westbound during morning school commute.

*Marin Transit Route 127 (Local)* – This route provides weekday school service along the Sir Francis Drake Boulevard Corridor between San Rafael and Fairfax with stops in Fairfax, Sleepy Hollow, Butterfield and at the White Hill Middle School. Route 127 operates with approximately ten-minute headways during school commute hours.

## **Bicyclists**

The Town's existing bikeway system is comprised of Class I multi-use pathways, Class II bike lanes, and Class III bike routes. Within the project study area, Broadway is signed as a Class III bike route where bicyclists share the road with vehicular traffic. Broadway is a critical link along Route 20, the countywide East-West Bikeway, which is a continuous route of existing and proposed bikeways that extends from San Rafael and North-South Bikeway to west Marin. East of the study area, recently constructed Class II bike lanes, pedestrian improvements, and landscaping extend along Center Boulevard from Pacheco Avenue to Pastori Avenue. West of the project study area, Class II bike lanes are provided along Sir Francis Drake Boulevard from Claus Drive to Shadow Creek Court near the western Town limit, though a short gap exists in the eastbound direction between Olema Road and Claus Drive where a Class I pathway parallels Sir Francis Drake Boulevard and extends from Olema Road to Broadway in front of the Fairfax Library.



Bicycle access along Broadway was a focal point of this study. Bicycle activity in downtown Fairfax is heavy, and has been increasing steadily in recent years as bicycling becomes increasingly popular in Fairfax and throughout Marin County for recreation, commute, utilitarian, and school commute trips. The current conditions and lane configurations on Broadway leave bicyclists without a dedicated lane or pathway along one of the Town's most congested stretches of roadway. While the proximity of controlled intersections along with the expectation drivers have of pedestrians in the area tend to keep vehicle travel speeds below 35 mph, bicyclists are forced to negotiate a variety of dynamics in the corridor including on-street parking with high turnover, transit operations, freight trucks loading and unloading, and westbound vehicles that are passing and jostling for position as they negotiate turn and through travel lanes at the intersection of Broadway/Bolinas Road. Broadway is also on the bicycle commute route to St. Rita's School and Manor Elementary School.

The 2008 *Town of Fairfax Bicycle and Pedestrian Master Plan* proposes Class II bike lanes on Broadway from Pacheco Avenue to Claus Drive.

## **Pedestrians**

Pedestrian access within the study area is provided by a mostly continuous network of sidewalks and crosswalks. In general, the existing sidewalks in the area were constructed in the early and mid-20<sup>th</sup> century when downtown development occurred. Continuous sidewalks are provided along the north side of Sir Francis Drake Boulevard and the south side of Broadway. Limited sidewalk coverage is provided along the frontage of the Parkade on the south side of Sir Francis Drake Boulevard and the north side of Broadway.

A general streetscape theme exists in the downtown core with exposed aggregate concrete sidewalk, brick inlaid crosswalks outlined with traditional transverse crosswalk stripes, various street furniture (often supplied by local merchants), and decorative double lantern style street lights.

There are four crosswalks on Broadway in the study area and two crosswalks on Sir Francis Drake Boulevard. On Broadway, a brick paved crosswalk is located on the eastern leg of the intersection at Claus Drive and a “ladder” style crosswalk on the western leg at the Bolinas Road intersection. There are two midblock crosswalks between Bolinas Road and Pacheco Avenue. Both crosswalks have the “ladder” style of striping which provides maximum visibility of the striping. Pedestrian traffic at these two crossing locations was observed to be fairly frequent, resulting in increased driver awareness due to the expectation that pedestrians may be present. The eastern mid-block crosswalk is located in front of the Fairfax Theatre, and the second (middle) mid-block crosswalk is located adjacent to the Thai Restaurant. An In-Street Pedestrian Crossing Sign is provided at the middle mid-block crosswalk. Brick paved crosswalks are also located on the northern and eastern legs at the study intersection of Sir Francis Drake Boulevard/Claus Drive and on the northern and eastern legs at the intersection of Sir Francis Drake Boulevard with Taylor Drive.



Wide sidewalks are provided on the north side of Sir Francis Drake Boulevard.

### ADA Access

There are some curb ramps at intersections in the study area; however, none of these ramps meet current ADA standards.

There is a grade difference between the Parkade and Broadway; Broadway is approximately three feet lower than the Parkade (the elevation difference is a presumed relic of the historic train platform). Three pedestrian access points that span this grade differential are provided into the Parkade from Broadway. Near the east end of the Parkade, a stairwell is provided between the Parkade and a mid-block crosswalk on Broadway that leads to the front entrance of the Fairfax Theatre. The stairwell consists of approximately five steps and is generally not user friendly or ADA compliant. It is excessively steep, with shallow stair treads, and lacks ADA landings on either end. Near the center of the Parkade, a stairwell is provided between the Parkade and a mid-block crosswalk on Broadway that leads to the Thai restaurant and Peri's. This stairwell also consists of approximately five steps and is generally not user friendly or ADA compliant. It is excessively steep, with shallow stair treads, and also lacks ADA landings on either end.



An ADA wheelchair ramp provides access from Broadway to the Parkade adjacent to Bolinas Road.

A third pedestrian access point is provided near the western end of the Parkade that connects to the crosswalk on Broadway, on the western leg of Broadway/ Bolinas Road intersection. This access point is primary gateway from Broadway and the center of Town into the Parkade. Wide decorative concrete stairs are provided with pedestrian scale lighting, handrails, bollards, landscaping, and seating. A separate ADA wheelchair ramp is provided adjacent to the stairs.

## **Community Input**

Community input for the plan was obtained through stakeholders meetings conducted with Town staff and a representative of the Towns' General Plan and Bicycle and Pedestrian Advisory Committees. Technical input was provided by staff and the NTPP's Fairfax to San Rafael Cross Marin Bikeway Feasibility Study's Technical Advisory Committee. Public input for the project was obtained in a joint public workshop conducted in Fairfax for this study and the Fairfax to San Rafael Cross Marin Bikeway Feasibility Study. Public input documentation is included in Appendix B.

## Project Goals and Objectives

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Goals and objectives for the project were developed utilizing existing resources such as the Town's *General Plan*, the 2009 draft *Town Center Element*, and the 2008 *Pedestrian and Bicycle Master Plan*, as well as County and regional documents. A summary of relevant Plans, goals, objectives, and policies is provided in Appendix C. The project goals and objectives describe the effort's overall vision, and the strategies and action steps necessary to achieve the vision for the Parkade area improvements. The project goals define the core purpose of the project while the guiding objectives are intended to help to facilitate actionable implementation measures.

**Goal: To balance bicycle, pedestrian and vehicular activity in the Town Center, specifically along Broadway near Claus Drive and within and around the Parkade.**

### Objectives

- Improve connections between land uses on the north side of Sir Francis Drake Boulevard with those on the south side of the Broadway.
- Complete and/or improve the east/west bicycle corridor (Route 20) through Fairfax.
- Improve ADA access within the study area.
- Increase the supply of bicycle parking within the study area.
- Improve pedestrian circulation around and through the Parkade.
- Improve safety conditions for bicyclists and pedestrians in the study area.
- Maintain and where possible increase vehicle parking supplies in the study area.
- Ensure consistency with adopted plans, goals, policies, and standards.
- Provide maximum benefit to the public.

## Study Area Issues and Opportunities

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The following issues and opportunities for the study area were identified through field reconnaissance, interviews with staff and community stakeholders, public input, and existing documentation, including the *Fairfax General Plan*, *Town Center Plan*, and *Pedestrian and Bicycle Master Plan*:

### Issues

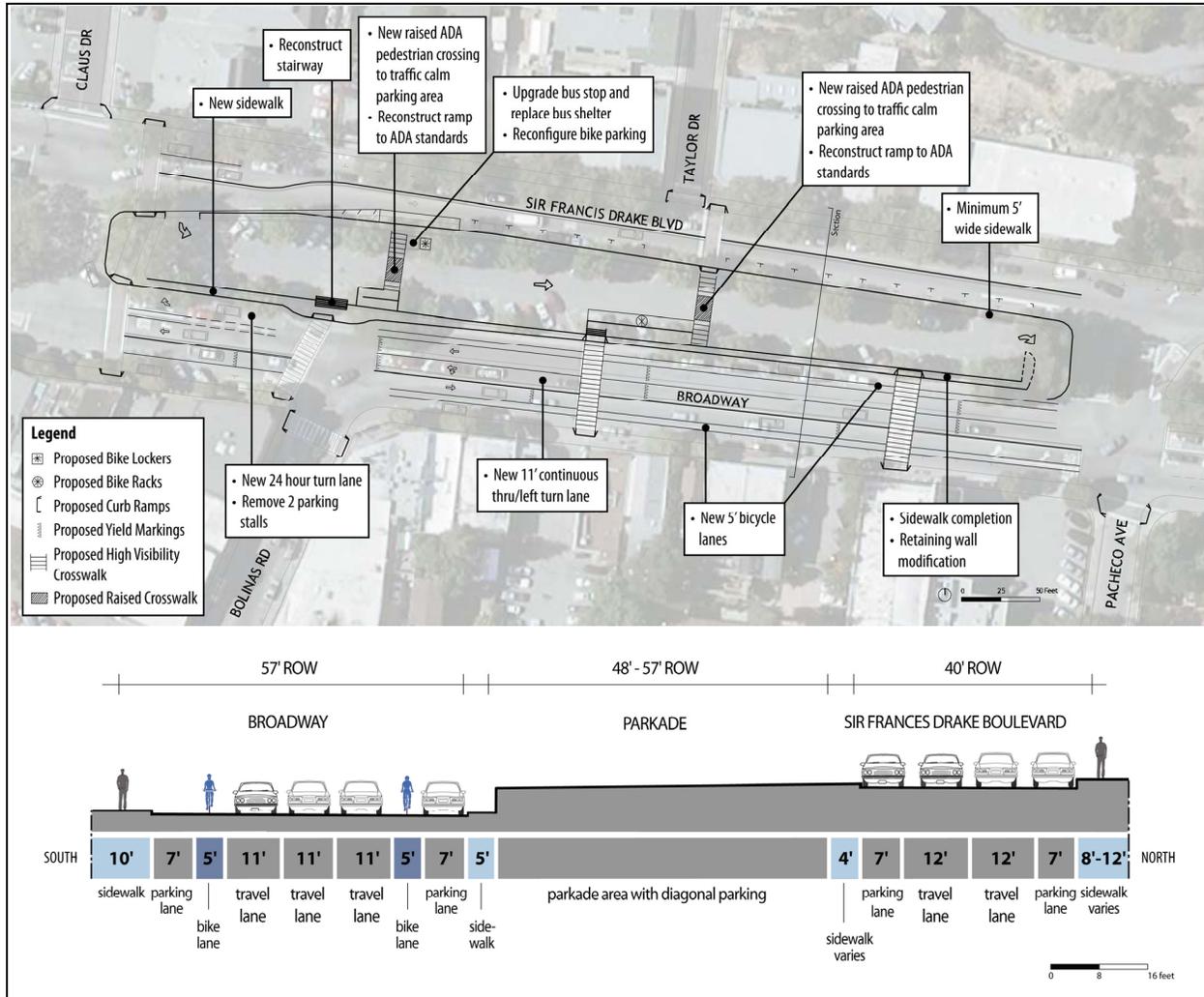
- There are a variety of competing needs and community interests for space within the Parkade area including auto parking, bicycle parking, transit amenities, landscaping, pedestrian amenities, and “town square” or “plaza” improvements.
- Grade differentials and the current layout of the Parkade result in visual and physical separations between the businesses on the north side of Sir Francis Drake Boulevard and those on the south side of Broadway.
- The grade differential between the Parkade and Broadway and existing stairwells near the center and eastern ends of the Parkade present ADA accessibility issues.
- Existing access and egress to the Parkade for vehicular traffic is limited to one way in and one way out. Both driveway access points are located immediately adjacent to intersections.
- Tight spacing of the intersections at Bolinas Road/Broadway, Bank Street/Broadway and Sir Francis Drake Boulevard/Bank Street-Claus Drive results in vehicle stacking during peak periods which impacts bicyclists and pedestrians.
- Bicycle circulation through the town center, including the transition along Bicycle Route 20 from Sir Francis Drake Boulevard onto Claus Drive and Broadway, is difficult for bicyclists, especially during peak periods.
- Pedestrian and bicycle circulation is currently subordinate to vehicle flow in the study area.
- According to the draft Town Center Element, a sight line hazard exists for eastbound Sir Francis Drake Boulevard drivers turning right onto southbound Claus Drive, as well as for westbound drivers turning left to proceed south on Claus Drive. Potential conflicts arise when vehicles make uncontrolled turns from eastbound Broadway onto northbound Claus Drive. A sign is posted prohibiting the Broadway eastbound left turn during weekday a.m. and p.m. peak hours, but the prohibition is frequently ignored.
- Queuing space is severely limited on Claus Drive (Bank Street) between Sir Francis Drake Boulevard and Broadway. During peak periods, congestion occurs when operations at these tightly spaced intersections begin to impact each other, which often results in lengthy queues.
- Staff has identified a sight line conflict in the downtown area for concurrent turns from Sir Francis Drake Boulevard and Broadway (described above); specifically, Sir Francis Drake eastbound right and westbound left turns to Claus Drive can conflict with concurrent eastbound left and westbound through vehicle movements from Broadway at Claus Drive.

## Opportunities

- Low-cost improvements such as directional signage, striping, markings, and bicycle parking improvements can result in significant safety enhancements for pedestrian and bicycle circulation within the study area.
- There is an opportunity to locate striped crosswalks through the Parkade to improve the linkage between Sir Francis Drake Boulevard and Broadway; and thereby defining a pedestrian path of safe travel across the Parkade.
- There is an opportunity to improve the existing Parkade sidewalks and complete the sidewalks on both north and south sides of the Parkade where they currently do not exist.
- There is an opportunity to make pedestrian travel in the Study area ADA compliant.
- There is a potential to achieve parking gains both on-street and within the Parkade through re-striping and reorganization of existing layouts.
- The strategic use of consistent design elements can help to link activities on Sir Francis Drake and Broadways and improve pedestrian access through the Parkade.
- There are opportunities to significantly increase the supply of both short- and long-term bicycle parking infrastructure within the Parkade and greater study area to meet existing demand and draw more activity for downtown businesses.
- Consistent use of high visibility crosswalks throughout the Town Center area will help to emphasize the expectation of pedestrian activity.

## Proposed Improvements

A series of proposed improvements were developed based on input from staff and the public. The improvements consist of relatively low-cost measures that can be implemented in the short-term without major impacts to existing infrastructure. Graphical plans of the study area including existing conditions, proposed improvements, and cross sections are presented in Plate 2. The graphical plan and the proposed improvements contained within are also a component of the larger *Fairfax to San Rafael Cross Marin Bikeway Feasibility Study*.



**Plate 2 – Project Improvement Plan**

### Sidewalk Improvements

To improve pedestrian circulation along the Parkade frontages, sidewalk improvements are recommended on the south side of Sir Francis Drake Boulevard and the north side of Broadway. Currently, a mix of standard and substandard sidewalks is provided along the north and south sides of the Parkade from approximately Taylor Drive to Claus Drive, while sidewalks are not provided at all from approximately Taylor Drive to Pacheco Avenue. It is recommended that, at a minimum, continuous five-foot wide

sidewalks be provided along the frontage segments. To achieve consistent sidewalk widths, the following strategies can be employed:

- *Sir Francis Drake Boulevard* – Reduce travel lane widths from 13 feet to 12 feet and relocate the curb line. Two to three feet can then be allocated to sidewalk widening. The remaining width can be obtained from the Parkade by narrowing the existing planting strip where necessary.
- *Broadway* – Modifications to the concrete embankment will be necessary to obtain the width needed to construct a sidewalk on the north side of Broadway. Two different methods are currently employed to transition the grade between the Parkade and Broadway: a retaining wall and an embankment. Where the retaining wall is in place from approximately Taylor Drive to the west, a five-foot wide sidewalk is provided. Where the embankment is in place from approximately Taylor Drive to the east, there is no space available for a sidewalk. Therefore, it is recommended the embankment be replaced with a retaining wall and a five-foot wide sidewalk installed.

### **Bicycle Circulation Improvements**

The Class II bike lanes on Center Boulevard which currently terminate at Pacheco Avenue should be extended to Claus Drive. Class II bike lanes can be achieved by reducing existing vehicle lane widths from 18 feet-12 feet-13 feet to three 11-foot lanes, providing ten feet for two five-foot bike lanes.

### **Bicycle Parking**

To address bicycle parking needs and increase the supply of bicycle parking in the study area it is recommended that secure bicycle lockers be installed in the Parkade adjacent to the transit shelter, and that the existing supply of short term racks adjacent to the transit shelter be reorganized. It is estimated that six bicycle lockers and six additional bicycle racks can be accommodated in the vicinity of the transit shelter without impacting adjacent vehicle parking spaces. Further, it is recommended that bicycle racks be installed as needed and/or requested in front of businesses on the north side of Sir Francis Drake Boulevard. It is recommended that consideration be given to the conversion of one on-street parking space on the south side of Broadway to bicycle parking.

### **Signing Improvements**

To guide and inform visitors and residents alike, reinforce sense of place, and to help unify businesses on the north and south sides of the Parkade, a signing campaign consisting of guide, directional, and warning signs for pedestrians, bicyclists, and motorists is recommended.

Warning advisory signs, “yield here to pedestrians” signs, and advance yield pavement markings (‘shark’s teeth’) are recommended at midblock crosswalks on Broadway and the uncontrolled crossing of Sir Francis Drake Boulevard at Taylor Drive.

### **Crosswalks**

Install pedestrian pathways/crosswalk treatments linking existing crosswalks on Broadway and Sir Francis Drake Boulevard through the Parkade. Especially important is a connection between the ADA ramps

adjacent to Bolinas Road leading through the Parkade to the transit stop and sidewalk on Sir Francis Drake Boulevard.

Upgrade existing crosswalks with high visibility striping (continental pattern) and reflective delineators. Maintain in-roadway 'knockdown signs'. Consider replacing brick crosswalk treatments overtime as a component of maintenance and resurfacing projects and replace with high visibility "Continental" markings.

### **Streetscape Elements**

Employ consistent streetscape materials to visually and physically link Broadway and Sir Francis Drake Boulevard (to be determined through the process of developing a Town Center Plan as called for in the draft 2009 *Town Center Element*).

### **Landscape Elements**

Increase landscape opportunities around the perimeter and within the Parkade to "green up" the site.

### **Transit Enhancements**

It is recommended that the existing transit shelter be upgraded and/or replaced with a user-friendly compact design. Doing so would provide the opportunity to reorganize the existing space within the Parkade that is dedicated to transit amenities, and install more short-term and/or long-term bicycle parking within roughly the same footprint. An upgraded bus shelter should incorporate features such as solar lighting and changeable message signs.

### **ADA Access Improvements**

ADA Curb ramp upgrades and tactile inlays are proposed at all transition points within the Parkade Study area to improve access for the disabled and the general population alike. ADA compliant curb ramps help to provide access between the sidewalk and the roadway for the disabled, people pushing stroller and carts, bicyclists, and others. Where feasible, separate curb ramps for each crossing direction should be provided rather than providing a single curb ramp at a corner for both crosswalks as separate curb ramps along with tactile inlays provide improved orientation for disabled pedestrians, especially the visually impaired. Curb ramp upgrade/installation is recommended at the following locations.

#### Intersections

- Sir Francis Drake Boulevard/Claus Drive – northwest, northeast, and southeast corners
- Broadway/Claus Drive – northeast and southeast corners
- Broadway/Bolinas Road – northwest, southwest, and southeast corners
- Broadway/Pacheco Avenue – northeast, southeast, and southwest corners
- Sir Francis Drake Boulevard/Taylor Drive – northwest, northeast, and southeast corners

#### Midblock Crosswalk Locations

- Broadway – midblock crosswalk adjacent to Siam Lotus, north and south sides
- Broadway – midblock crosswalk adjacent to Fairfax Theatre, north and south sides

## Parkade

- Transition point from Parkade to Sir Francis Drake Boulevard sidewalk and crosswalk at Taylor Drive

### **Stairwell Upgrades**

There are three existing stairwells that lead from the Parkade down to grade on Broadway, of which two are recommended for reconstruction. The western set of stairs is located opposite the crosswalk at Bolinas Road and an accessible handicap ramp is provided; no changes are recommended to this infrastructure. The middle and eastern stairwells are located opposite the Thai Restaurant and the Fairfax Theatre respectively.

Both sets of stairs are, at best, difficult to negotiate. They each have a sharp rise, short run, and narrow treads, and neither includes curb ramps or landings at the transition points. It is recommended that both of these stairwells be reconstructed so that the run may be extended, tread heights and depths built to code, and ramps and ADA landings installed at both ends.

### **Parking**

Remove the two parking spaces on the north side of Broadway between Claus Drive and Bolinas Road to improve circulation. Evaluate the potential to convert the first two to three parallel parking spaces on the north side of the Parkade adjacent to and east of the Taylor Drive crosswalk to diagonal parking spaces.

### **Project Cost**

A planning level cost estimate was completed for these Parkade transportation improvements and was estimated at approximately \$434,000 as shown in Table 2.

**Table 2  
Parkade Construction Cost Estimate**

<b>No.</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Cost</b>	<b>Total</b>
1	ADA Curb Ramps	19	EA	\$4,500	\$85,500
2	Reconstruct Stairwells	2	EA	\$8,500	\$17,000
3	Remove & Reconstruct 5' Sidewalk <i>South side of SFDB</i>	3,000	SF	\$15.00	\$45,000
4	Remove & Reconstruct 5' Sidewalk <i>North side of Broadway</i>	4,200	SF	\$15.00	\$63,000
5	Remove & Reconstruct Retaining Wall <i>South side of Parkade</i>	1,800	SF	\$20.00	\$36,000
6	Signing and Striping <i>Broadway Blvd</i>	1	LS	\$1,5000	\$15,000
7	Bicycle Parking (Class II Racks) <i>Various Locations</i>	12	EA	\$250	\$3,000
8	Bicycle Parking (Class I Lockers)	6	EA	\$2,000	\$12,000
9	Guide/Directional Signing	1	LS	\$1,000	\$1,000
10	Crosswalk Striping ( <i>Repair &amp; Replacement</i> )	1	LS	\$2,500	\$2,500
11	Landscaping	1	LS	\$15,000	\$15,000
12	Transit Shelter	1	LS	\$15,000	\$15,000
<b>Subtotal</b>					<b>\$310,000</b>
13	Design				\$46,500
14	Engineering				\$46,500
15	Contingency				\$31,000
<b>Total</b>					<b>\$434,000</b>

## References

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### References

*Fairfax Bicycle and Pedestrian Master Plan*, Alta Planning + Design, 2008

*Fairfax to San Rafael Cross Marin Bikeway Feasibility Study*, Alta Planning + Design, 2010

Golden Gate Transit, <http://goldengatetransit.org/schedules/pages/Bus-Schedules.php>

Marin Transit, <http://www.marintransit.org/mapsskeds.html>

FAI009



## Appendix A

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### Intersection Level of Service Calculations



AM Peak Hour - Existing Conditions  
Parkade Study  
Town of Fairfax

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1 Sir Francis Drake Blvd/Claus Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.616  
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 16.4  
Optimal Cycle: 40 Level Of Service: B

\*\*\*\*\*  
Street Name: Claus Dr Sir Francis Drake Blvd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0

Lanes: 0 1 0 0 1 0 0 1 0 1 0 1 1 0 0 1 0

Volume Module: 7:45 - 8:45 am

Base Vol: 205 5 15 35 10 10 730 140 45 395 10

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 205 5 15 35 10 10 730 140 45 395 10

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 205 5 15 35 10 10 730 140 45 395 10

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 205 5 15 35 10 10 730 140 45 395 10

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 205 5 15 35 10 10 730 140 45 395 10

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.70 0.70 0.85 0.76 0.76 0.76 0.95 1.00 0.85 0.95 1.00 1.00

Lanes: 0.98 0.02 1.00 0.64 0.18 0.18 1.00 1.00 1.00 1.00 0.98 0.02

Final Sat.: 1300 32 1615 920 263 263 1805 1900 1615 1805 1846 47

Capacity Analysis Module:

Vol/Sat: 0.16 0.16 0.01 0.04 0.04 0.04 0.01 0.38 0.09 0.02 0.21 0.21

Crit Moves: \*\*\*\*

Green/Cycle: 0.26 0.26 0.26 0.26 0.26 0.26 0.62 0.62 0.62 0.62 0.65

Volume/Cap: 0.62 0.62 0.04 0.15 0.15 0.15 0.33 0.62 0.14 0.62 0.33 0.33

Delay/Veh: 36.2 36.2 28.0 29.0 29.0 29.0 54.9 12.5 7.8 62.0 8.1 8.1

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 36.2 36.2 28.0 29.0 29.0 29.0 54.9 12.5 7.8 62.0 8.1 8.1

LOS by Move: D C C C C D B A E A A

HCM2kAVGQ: 7 7 0 1 1 1 14 2 2 2 6 6

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

PM Peak Hour - Existing Conditions  
Parkade Study  
Town of Fairfax

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1 Sir Francis Drake Blvd/Claus Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.428  
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 20.9  
Optimal Cycle: 28 Level Of Service: C

\*\*\*\*\*  
Street Name: Claus Dr Sir Francis Drake Blvd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0

Lanes: 0 1 0 0 1 0 0 1 0 1 0 1 1 0 0 1 0

Volume Module: 4:15 - 5:15 pm

Base Vol: 190 40 40 20 35 25 35 375 100 45 150 40

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 190 40 40 20 35 25 35 375 100 45 150 40

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 190 40 40 20 35 25 35 375 100 45 150 40

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 190 40 40 20 35 25 35 375 100 45 150 40

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 190 40 40 20 35 25 35 375 100 45 150 40

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.71 0.71 0.85 0.88 0.88 0.88 0.95 1.00 0.85 0.95 0.97 0.97

Lanes: 0.83 0.17 1.00 0.25 0.44 0.31 1.00 1.00 1.00 1.00 0.79 0.21

Final Sat.: 1110 234 1615 416 729 520 1805 1900 1615 1805 1452 387

Capacity Analysis Module:

Vol/Sat: 0.17 0.17 0.02 0.05 0.05 0.05 0.02 0.20 0.06 0.02 0.10 0.10

Crit Moves: \*\*\*\*

Green/Cycle: 0.40 0.40 0.40 0.40 0.40 0.40 0.08 0.46 0.46 0.06 0.44 0.44

Volume/Cap: 0.43 0.43 0.06 0.12 0.12 0.12 0.24 0.43 0.13 0.43 0.24 0.24

Delay/Veh: 22.2 22.2 18.5 19.0 19.0 19.0 43.8 18.4 15.5 48.3 17.8 17.8

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 22.2 22.2 18.5 19.0 19.0 19.0 43.8 18.4 15.5 48.3 17.8 17.8

LOS by Move: C C B B B B B D B D B

HCM2kAVGQ: 5 5 1 2 2 2 1 8 2 2 4 4

\*\*\*\*\*

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*



AM Peak Hour - Existing Conditions  
Parkade Study  
Town of Fairfax

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3 Broadway Blvd/Claus Dr  
\*\*\*\*\*

Average Delay (sec/veh): 13.8 Worst Case Level Of Service: C [ 21.0]

Street Name: Claus Dr Broadway Blvd

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include Include Include  
Lanes: 0 0 0 0 0 0 1 1 0 0 0 1 0 0 0 0 1 0 1

Volume Module:7:45 - 8:45 am

Base Vol: 0 0 160 0 35 15 220 0 110 210  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 160 0 35 15 220 0 110 210  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 0 0 160 0 35 15 220 0 110 210  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 160 0 35 15 220 0 110 210

Critical Gap Module:

Critical Gap:xxxx xxxx xxxx 4.1 xxxx xxxx 7.1 6.5 xxxx xxxx 6.5 6.2  
FollowUpTim:xxxx xxxx xxxx 2.2 xxxx xxxx 3.5 4.0 xxxx xxxx 4.0 3.3

Capacity Module:

Conflict Vol: xxxx xxxx xxxx 0 xxxx xxxx 393 338 xxxx xxxx 355 0  
Potent Cap.: xxxx xxxx xxxx 900 xxxx xxxx 571 587 xxxx xxxx 574 900  
Move Cap.: xxxx xxxx xxxx 900 xxxx xxxx 306 472 xxxx xxxx 462 900  
Volume/Cap: xxxx xxxx xxxx 0.18 xxxx xxxx 0.05 0.47 xxxx xxxx 0.24 0.23

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxx 0.6 xxxx xxxx xxxx xxxx xxxx 0.9 0.9  
Control Del:xxxx xxxx xxxx 9.9 xxxx xxxx xxxx xxxx xxxx 15.2 10.2  
LOS by Move: \* \* \* \* \* A \* \* \* \* \* \* \* \* \* \* \* C B  
Movement: LT - LTR - RT  
Shared Cap.: xxx xxx xxx xxx xxx 456 xxx xxx xxx xxx xxx xxx  
SharedQueue:xxxx xxx xxx xxx xxx 2.9 xxx xxx xxx xxx xxx xxx  
Shrd ConDel:xxxx xxx xxx xxx xxx 21.0 xxx xxx xxx xxx xxx xxx  
Shared LOS: \* \* \* \* \* C \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: xxxxxx 21.0 \* \* \* \* \* 11.9  
ApproachLOS: \* \* \* \* \* C \* \* \* \* \* B

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

PM Peak Hour - Existing Conditions  
Parkade Study  
Town of Fairfax

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3 Broadway Blvd/Claus Dr  
\*\*\*\*\*

Average Delay (sec/veh): 12.4 Worst Case Level Of Service: C [ 17.5]

Street Name: Claus Dr Broadway Blvd

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include Include Include  
Lanes: 0 0 0 0 0 0 1 1 0 0 0 1 0 0 0 0 1 0 1

Volume Module:4:15 - 5:15 pm

Base Vol: 0 0 145 0 35 20 160 0 135 250  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 145 0 35 20 160 0 135 250  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 0 0 145 0 35 20 160 0 135 250  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 0 145 0 35 20 160 0 135 250

Critical Gap Module:

Critical Gap:xxxx xxxx xxxx 4.1 xxxx xxxx 7.1 6.5 xxxx xxxx 6.5 6.2  
FollowUpTim:xxxx xxxx xxxx 2.2 xxxx xxxx 3.5 4.0 xxxx xxxx 4.0 3.3

Capacity Module:

Conflict Vol: xxxx xxxx xxxx 0 xxxx xxxx 375 308 xxxx xxxx 325 0  
Potent Cap.: xxxx xxxx xxxx 900 xxxx xxxx 586 610 xxxx xxxx 596 900  
Move Cap.: xxxx xxxx xxxx 900 xxxx xxxx 291 503 xxxx xxxx 492 900  
Volume/Cap: xxxx xxxx xxxx 0.16 xxxx xxxx 0.07 0.32 xxxx xxxx 0.27 0.28

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxx 0.6 xxxx xxxx xxxx xxxx xxxx 1.1 1.1  
Control Del:xxxx xxxx xxxx 9.8 xxxx xxxx xxxx xxxx xxxx 15.1 10.5  
LOS by Move: \* \* \* \* \* A \* \* \* \* \* \* \* \* \* \* \* C B  
Movement: LT - LTR - RT  
Shared Cap.: xxx xxx xxx xxx xxx 465 xxx xxx xxx xxx xxx xxx  
SharedQueue:xxxx xxx xxx xxx xxx 1.8 xxx xxx xxx xxx xxx xxx  
Shrd ConDel:xxxx xxx xxx xxx xxx 17.5 xxx xxx xxx xxx xxx xxx  
Shared LOS: \* \* \* \* \* C \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: xxxxxx 17.5 \* \* \* \* \* 12.1  
ApproachLOS: \* \* \* \* \* C \* \* \* \* \* B

Note: Queue reported is the number of cars per lane.

\*\*\*\*\*

AM Peak Hour - Existing Conditions  
Parkade Study  
Town of Fairfax

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #4 Broadway Blvd/Bolinas Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.696  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.5  
Optimal Cycle: 0 Level Of Service: C

\*\*\*\*\*  
Street Name: Bolinas Rd Broadway Blvd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 1 0 0 0 0 0 0 0 0 0 1 0 1 0 0 0

Volume Module:

Base Vol: 135 0 320 0 0 0 0 300 80 180 185 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 135 0 320 0 0 0 0 300 80 180 185 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 135 0 320 0 0 0 0 300 80 180 185 0  
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 135 0 320 0 0 0 0 300 80 180 185 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 135 0 320 0 0 0 0 300 80 180 185 0

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.30 0.00 0.70 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
Final Sat.: 194 0 460 0 0 0 0 553 617 511 549 0

Capacity Analysis Module:

Vol/Sat: 0.70 xxxxx 0.70 xxxxx xxxxx xxxxx 0.54 0.13 0.35 0.34 xxxxx  
Crit Moves: \*\*\*\*  
Delay/Veh: 18.8 0.0 18.8 0.0 0.0 0.0 0.0 15.8 9.1 13.0 12.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 18.8 0.0 18.8 0.0 0.0 0.0 0.0 15.8 9.1 13.0 12.0 0.0  
LOS by Move: C \* C \* \* \* C A B B \*  
ApproachDel: 18.8 xxxxxx 14.4  
Delay Adj: 1.00 xxxxxx 1.00  
ApprAdjDel: 18.8 xxxxxx 14.4  
LOS by Appr: C \* B  
AllWayAVQ: 1.9 1.9 1.9 0.0 0.0 0.0 1.0 0.1 0.5 0.5 0.0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

PM Peak Hour - Existing Conditions  
Parkade Study  
Town of Fairfax

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #4 Broadway Blvd/Bolinas Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.648  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.4  
Optimal Cycle: 0 Level Of Service: C

\*\*\*\*\*  
Street Name: Bolinas Rd Broadway Blvd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 1 0 0 0 0 0 0 0 0 0 1 0 1 0 0 0

Volume Module:

Base Vol: 110 0 305 0 0 0 0 190 115 310 275 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 110 0 305 0 0 0 0 190 115 310 275 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 110 0 305 0 0 0 0 190 115 310 275 0  
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 110 0 305 0 0 0 0 190 115 310 275 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 110 0 305 0 0 0 0 190 115 310 275 0

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.27 0.00 0.73 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00  
Final Sat.: 170 0 471 0 0 0 0 535 595 536 578 0

Capacity Analysis Module:

Vol/Sat: 0.65 xxxxx 0.65 xxxxx xxxxx xxxxx 0.36 0.19 0.58 0.48 xxxxx  
Crit Moves: \*\*\*\*  
Delay/Veh: 17.4 0.0 17.4 0.0 0.0 0.0 0.0 12.5 9.8 17.7 14.0 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 17.4 0.0 17.4 0.0 0.0 0.0 0.0 12.5 9.8 17.7 14.0 0.0  
LOS by Move: C \* C \* \* \* B A C B \*  
ApproachDel: 17.4 xxxxxx 11.5  
Delay Adj: 1.00 xxxxxx 1.00  
ApprAdjDel: 17.4 xxxxxx 11.5  
LOS by Appr: C \* B  
AllWayAVQ: 1.6 1.6 1.6 0.0 0.0 0.0 0.0 0.2 1.2 0.8 0.0

\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.  
\*\*\*\*\*

AM Peak Hour - Existing Conditions  
Parkade Study  
Town of Fairfax

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5 Pacheco Ave/Center Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.700  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 14.8  
Optimal Cycle: 0 Level Of Service: B

\*\*\*\*\*  
Street Name: Pacheco Ave Center Blvd  
Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Include Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0  
Lanes: 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0

Volume Module:

Base Vol: 10 10 50 75 5 95 145 440 10 10 220 10  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 10 10 50 75 5 95 145 440 10 10 220 10  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 10 10 50 75 5 95 145 440 10 10 220 10  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 10 10 50 75 5 95 145 440 10 10 220 10  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 10 10 50 75 5 95 145 440 10 10 220 10

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.14 0.14 0.72 0.94 0.06 1.00 1.00 0.98 0.02 0.04 0.92 0.04  
Final Sat.: 72 72 362 443 30 559 586 629 14 24 539 24

Capacity Analysis Module:

Vol/Sat: 0.14 0.14 0.14 0.17 0.17 0.17 0.25 0.70 0.70 0.41 0.41 0.41  
Crit Moves: \*\*\*\*  
Delay/Veh: 10.4 10.4 10.4 11.2 11.2 9.8 10.7 19.7 19.7 12.8 12.8 12.8  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 10.4 10.4 10.4 11.2 11.2 9.8 10.7 19.7 19.7 12.8 12.8 12.8  
LOS by Move: B B B B A B C C B B B  
ApproachDel: 10.4 10.4 10.4 17.5 17.5 12.8  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00  
ApprAdjDel: 10.4 10.4 10.4 17.5 17.5 12.8  
LOS by Appr: B B B C  
AllWayAVQ: 0.1 0.1 0.1 0.2 0.2 0.2 0.3 2.0 2.0 0.6 0.6 0.6  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.

PM Peak Hour - Existing Conditions  
Parkade Study  
Town of Fairfax

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5 Pacheco Ave/Center Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.950  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 29.2  
Optimal Cycle: 0 Level Of Service: D

\*\*\*\*\*  
Street Name: Pacheco Ave Center Blvd  
Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Include Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0  
Lanes: 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0

Volume Module:

Base Vol: 10 5 28 81 14 128 120 326 9 29 499 45  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 10 5 28 81 14 128 120 326 9 29 499 45  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 10 5 28 81 14 128 120 326 9 29 499 45  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 10 5 28 81 14 128 120 326 9 29 499 45  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 10 5 28 81 14 128 120 326 9 29 499 45

Saturation Flow Module:

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.23 0.12 0.65 0.85 0.15 1.00 1.00 0.97 0.03 0.05 0.87 0.08  
Final Sat.: 106 53 296 391 68 536 566 16 31 525 47

Capacity Analysis Module:

Vol/Sat: 0.09 0.09 0.09 0.21 0.21 0.24 0.22 0.58 0.58 0.95 0.95 0.95  
Crit Moves: \*\*\*\*  
Delay/Veh: 11.1 11.1 11.1 12.2 12.2 11.1 11.1 16.4 16.4 48.7 48.7 48.7  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 11.1 11.1 11.1 12.2 12.2 11.1 11.1 16.4 16.4 48.7 48.7 48.7  
LOS by Move: B B B B B B C C C E E E  
ApproachDel: 11.1 11.1 11.5 15.0 15.0 48.7  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00  
ApprAdjDel: 11.1 11.1 11.5 15.0 15.0 48.7  
LOS by Appr: B B B C  
AllWayAVQ: 0.1 0.1 0.1 0.2 0.2 0.3 1.2 1.2 1.2 6.7 6.7 6.7  
\*\*\*\*\*  
Note: Queue reported is the number of cars per lane.



## Appendix B

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### Public Input Comments





<b>Project Title: Fairfax-San Rafael Bicycle Connector Feasibility Study</b>		
<b>Meeting Date:</b> 9 June 2009, 7:30 p.m.	<b>Meeting Subject:</b> Public Meeting	<b>Meeting Location:</b> Fairfax Women's Club
<b>Project Manager:</b> Jim Moore	<b>Consultant:</b> Alta Planning + Design	

*Meeting Results:*

Subject		Statements/Comments/Questions
<b>Introduction of attendees</b>		Larry Bragman, Town Council Member and Jim Moore, Planning Director of Fairfax introduced the project and the project management team and consultants.
<b>Project Background &amp; Goals and Objectives</b>	1.	Ian Moore of Alta reviewed the project background including the Nonmotorized Transportation Pilot Program (NTPP), Ross Valley Transportation History, historic railroad alignments, project planning background. Ian Moore briefly discussed the overall project goals and objectives.
<b>Summary of Public Meeting #1</b>	1.	Ian Moore briefly summarized the key discussion points and outcome of the first public meeting held on March 3, 2009.
<b>Design Concepts</b>	1.	Ian Moore introduced the design toolkit for the project and described the existing conditions and proposed short-medium term alternatives and long-term vision for bicycle facilities in Fairfax, San Anselmo, and San Rafael.
	2.	Public Comments and Consultant Responses <ul style="list-style-type: none"> <li>• Comment 1: Do bicycle boulevards restrict car access?</li> <li>• Response 1: Vehicle access may be restricted if the traffic volume is, or is planned to be, greater than 5,000 vehicles per day. Restriction is not necessary when the traffic volume is less than 5,000 vehicles per day.</li> <li>• Comment 2: It was mentioned that the BPACs (Fairfax, San Anselmo) previously created a design toolkit and that some of the treatments seem to be missing from the toolkit described in the powerpoint presentation.</li> <li>• Response 2: Comment noted. Ian Moore stated that additional treatments are proposed and would be discussed later in the presentation in the context of specific roadway segments and intersections.</li> </ul>
<b>Segment 1A Fairfax</b>	1.	<b>Sir Francis Drake Blvd (SFD) at Olema Road (west):</b> Improvement Goal: Improve intersection to clarify lanes and help bicyclists navigate through the intersection. <ul style="list-style-type: none"> <li>•</li> </ul>
	2.	Public Comments and Consultant Responses <ul style="list-style-type: none"> <li>• Comment 3: The westbound bike lane is unpredictable along Sir Fancis Drake Boulevard. What is the consultant team's proposal for the segment east of the intersection?</li> <li>• Response 3: There is ample ROW to more clearly delineate.</li> <li>• Comment 4: Request for more signage for eastbound motorists along Sir Francis Drake Boulevard.</li> <li>• Response 4: Shoulder will be upgraded to Class II with signage.</li> <li>• Comment 5: What is the potential to construct a center island for refuge?</li> <li>• Response 5: A center island is not recommended due to concerns for traffic speeds, left turn and bus curculation.</li> </ul>

<b>Segment 1B</b> <i>Fairfax</i>	1.	<b>Sir Francis Drake Boulevard at Olema Road (east):</b> Improvement Goal: Improve intersection to provide better sight lines for motorists and improve visibility of bicyclists.
	2.	Public Comments and Consultant Responses <ul style="list-style-type: none"> <li>• Comment 6: What is the feasibility of an eastbound bike lane?</li> <li>• Response 6: An eastbound bike lane is considered infeasible as a short-medium term alternative along this segment due to the restricted right-of-way.</li> <li>• Comment 7: What are the plans for Broadway between Olema Road and the Parkade?</li> <li>• Response 7: This segment would be Class III, Bicycle Blvd. Development of Class II lanes would require acquisition of ROW and reconstruction of roadway.</li> </ul>
<b>Segment 2A</b> <i>Fairfax</i>	1.	<b>Fairfax Parkade Study</b> Improvement Goal: Improve overall circulation, access and safety in the Parkade area for vehicles, bicyclists and pedestrians, and improve the East-West Bikeway through downtown Fairfax.
	2.	Public Comments and Consultant Responses <ul style="list-style-type: none"> <li>• Comment 8: Instead of eliminating the left turn lane from Broadway onto Bolinas, would it be possible to restrict the hours to that is not a through lane at all times?</li> <li>• Response 8: Yes, that is a possibility.</li> <li>• Comment 9: The two parking spaces between Claus and Bolinas should be eliminated. These stalls currently are an enforcement problem.</li> <li>• Response 9: Yes, this would create space for bike pocket and turn lanes.</li> <li>• Comment 10: Are any improvements proposed for the crosswalk at Taylor Drive?</li> <li>• Response 10: Yes, consistent materials, striping, signage (way-finding, destination and crossing warning) are proposed.</li> <li>• Comment 11: The transition from Broadway onto Claus is very dangerous for bicyclists and pedestrians. What are the proposals for this area? Should a speed table be proposed here?</li> <li>• Response 11: Bicycle through travel is assumed to stay on Broadway. Bicyclists using Claus will be considered.</li> </ul>
<b>Segment 3</b> <i>San Anselmo</i>	1.	<b>Center Blvd</b> Improvement Goal: Develop concepts for how to install a Class I bikeway along Center Blvd.
	2.	Public Comments and Consultant Responses <ul style="list-style-type: none"> <li>• Comment 12: Is there any way to keep bicyclists off of Center?</li> <li>• Response 12: No, bikes are considered vehicles and can not be prohibited.</li> </ul>
<b>Segment 4A</b> <i>San Anselmo</i>	1.	<b>San Anselmo Hub</b> Improvement Goal: Improve intersection to reduce bicyclist crossing time and increase safety.  Proposed Solution: Replace free right turn lanes and pork chops on south side of intersection with dedicated right turn lanes.
<b>Segment 5A</b> <i>San Anselmo</i>	1.	<b>Greenfield/Red Hill Ave/Hilldale Dr Intersection</b> Improvement Goal: Improve intersection to reduce potential conflicts between motorists and bicyclists.  Proposed Solution: Improve intersection to reduce potential conflicts between motorists and bicyclists, and provide bicycle boulevard treatment to Greenfield Ave.

	2.	<p>Public Comments and Consultant Responses</p> <p>Comment 13: Is there a proposal for crossing Red Hill?</p> <p>Response: The consultant team will look into possible solutions.</p> <p>Comment 14: Any plans for optical detection?</p> <p>Comment 15: There are currently many stop signs on Greenfield which should be removed to enable bicyclists to continue riding without slowing/stopping.</p>
<b>Segment 5B</b> <i>San Anselmo</i>	1.	<p><b>4<sup>th</sup> St /Greenfield Ave/West End Ave Intersection</b></p> <p>Improvement Goal: Calm traffic and bicyclist speed in the intersection to reduce potential conflicts.</p> <p>Proposed Solution: Add median to channelize traffic. Provide intersection treatment such as textured concrete.</p>
<b>Segment 5C</b> <i>San Anselmo</i>	1.	<p><b>2<sup>nd</sup>/4<sup>th</sup> St. Intersection</b></p> <p>Improvement Goal: Create better connectivity to both 4th Street, so bicyclists can access the Transit Center, and 2nd St. so bicyclists can connect to 1st St., Anderson Drive, and the CalPark Tunnel.</p> <p>Proposed Solution: Consolidate the number of crossings needed from four to two, and reduce the amount of time it takes bicyclists to cross the intersection.</p> <p><b>2<sup>nd</sup> Street</b></p> <p>Improvement Goal: Improve the safety of the bicycle facilities from 2nd/4th St. intersection to the 2nd/1st St intersection.</p> <p>Proposed Solution: Widen the south side sidewalk to create a multi-use path.</p>
	2.	<p>Public Comments and Consultant Responses</p> <p>Comment 16: How would the proposed change delay traffic?</p> <p>Response 16: The current signals only stop vehicular movement in one direction at a time, allowing the opposite direction to move through the intersections. As proposed, the new crosswalk would require traffic along 2nd Street to stop in both directions at the same time.</p> <p>Comment 17: Is bike riding on the sidewalk illegal?</p> <p>Response: Bicycling on the sidewalk is legal in Fairfax, except for in the downtown (4<sup>th</sup> Street).</p> <p>Comment 18: What about the possibility of a bicycle/pedestrian fly-over the intersection?</p> <p>Response 18: The consultant team will look into this option. Typically, this option requires a great deal of room: two city blocks are required to ramp up and an addition two are required to ramp down.</p> <p>Comment 19: Better signage is needed from the northern medians across 4<sup>th</sup> Street.</p> <p>Comment 20: What is the feasibility of channelling people to cross on the streets one block to the east and/or west of this intersection? Those streets have lower traffic volumes.</p> <p>Response 20: The consultant team will look into these options.</p> <p>Comment 21: Westbound vehicles on 4<sup>th</sup> Street do not stop at the crosswalk.</p>
<b>Conclusion</b>	1.	Ian Moore concluded the meeting.
	2.	<p>Public Comments and Consultant Responses.</p> <p>Comment 22: A North-South bike study was prepared in 1993, but not adopted. How can we make sure this study is read and adopted by the three townships?</p> <p>Comment 23: The consultant team is requested to address the connecting pieces (especially eastbound bicyclists traveling east of Olema Road).</p>
<b>Project Schedule and Next Steps</b>	1.	Ian Moore briefly outlined the project schedule. Final recommendations are scheduled for the summer of 2009.

Meeting ended at 9:30p.m.

Attendees List:

<b>Name</b>	<b>Agency</b>
Leslie Morris	San Rafael DPW
Bob Stout	Adventure Cycling
Ian Moore	Alta Planning + Design
Holly Dabral	Alta Planning + Design
Kristin Maravilla	Alta Planning + Design
Sgt. O'Callaghan	Fairfax PD
Wendi Kallenis	Safe Routes to Schools
David Hoffman	MCBC
Matt Slepik	
Sven Junkergard	MCBC
Don Magdanz	San Rafael BPAC
Carey Lando	Marin Co. DPW
Richard Schneider	MCBC
Robert Miros	MCBC
Deb Hubsmith	MCBC
Stephen Bryne	Fairfax BPAC
Carol Ghiringtelli	Fairfax Resident
Bill Madsen	Fairfax Resident
Michael Rock	Fairfax Resident
Chris Lang	Fairfax Chamber of Commerce
Deirdra Rogers	MCBC
Patrick Seidler	TAM
Maureen Durnell	MCBC
Steven Plunkett	MCBC
Kim Bagnisch	MCBC
Tom Boss	San Anselmo BPAC
Steve Wyrostok	Lansdale Ave Resident
Larry Bragman	Fairfax Town Council
Joe Breeze	
John Reed	Fairfax BPAC
Josh Abrams	W-Trans

## Appendix C

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### Summary of Relevant Plans, Goals, Objectives, and Policies



## Summary of Relevant Goals, Objectives, and Policies

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### Relevant Plans

#### Fairfax Pedestrian and Bicycle Master Plan, 2008

The 2008 *Fairfax Bicycle and Pedestrian Master Plan* update provides for a town-wide network of bicycle paths, lanes and routes, along with bicycle-related programs and support facilities, intended to ensure bicycling becomes a viable transportation option for people who live, work and recreate in Fairfax. The purpose of this Bicycle and Pedestrian Master Plan is to improve bicycle and pedestrian transportation in Fairfax, in part by meeting the requirements of the California Bicycle Transportation Act, which requirements are contained in Section 890 of the California Streets and Highways Code.

The Plan calls for the following improvements in the downtown area:

- *Parkade Improvements Study*: This study proposes to examine the area surrounding the downtown Parkade area in Fairfax in terms of improving bicycle and pedestrian safety and circulation. The Fairfax BPAC has identified the segment of Sir Francis Drake Boulevard between Klaus and Pacheco as an important area for improvements for bicycling and walking.
- *San Rafael-Fairfax Corridor Study*: This study proposes to examine the corridor between Fairfax and San Rafael, with the goal of identifying improvements for bicycling and walking between the communities of Fairfax, San Anselmo and San Rafael. As a part of the bicycle plan update process, all updated plans along the corridor are being coordinated to “set the stage” for this study. The current Fairfax bicycle plan update contains a number of preliminary options for the connection to San Anselmo which would need to be examined in more detail through this process.
- *Broadway Class II bike lanes (Pacheco to Claus)*: Bicycle lanes are proposed to close the gap through the main downtown area. On-street parking can be retained, although two travel lanes will need to be reduced to 11’ in width. It is recommended that the westbound curb lane be maintained at 12’ to accommodate bus traffic.
- *Sir Francis Drake Boulevard Class II bike lanes (eastbound only, Claus to Olema)*: This challenging segment proposes to complete the Sir Francis Drake Bicycle Lanes in both directions west of Claus Drive. Due to the narrow roadway in this area, road widening and additional paved shoulders will be necessary. The needs of bicycles and pedestrians will need to be balanced in this area as the Town has already received Nonmotorized Transportation Pilot Program funding for a sidewalk parallel to this segment.
- Class III bike routes are proposed on Claus Drive and Pacheco Avenue in the study area.
- Bicycle Parking at public destinations, including major bus stops, community centers, libraries, parks, schools and commercial areas.
  - The following are potential new or improved locations for inverted-u or equivalent secure bicycle parking racks as determined through the BPAC process:
    - North side of Sir Francis Drake Boulevard Businesses:
      - Café Lotus*
      - Quality Liquors*
      - Peri’s Deli*
      - Barefoot Cafe*
      - Fairfax Cyclery/IGA (locate on sidewalk between tree planters)*

*Fairfax Theater*  
*Bev's Hair Design*  
*4 additional racks at other locations along Broadway*

- Pavement stencils for signal detectors

#### *Pedestrian Recommendations*

- As a Townwide policy, Fairfax should reduce corner curb radii when repaving streets and installing curb ramps where it increases safety of bikes and pedestrians. Fairfax should also consider, where necessary, retrofitting curb radii at all arterial and collector intersections in the downtown area.
- Fairfax should install curb ramps at all locations in the downtown and surrounding neighborhood areas where they currently do not exist. Fairfax should conduct a detailed curb ramp inventory throughout the Town to determine other locations that lack curb ramps. Priority locations for additional inventory would include schools, neighborhood parks, and community centers. As part of normal street re-paving projects, the Town should continue to install curb ramps if none currently exist, and to upgrade existing ramps to current standards.
- Fairfax should consider installation of in-pavement flashing lights at mid-block crosswalk locations such as those along Broadway, Center Boulevard and Sir Francis Drake Boulevard (east of Claus Drive in the downtown area).
- Fairfax should consider the feasibility of installing curb extensions at crosswalk locations where appropriate.
- Downtown pedestrian improvements (Broadway and Bolinas) – conceptual improvement project to improve conditions for pedestrians in the downtown business district, including the following potential improvements:
  - Sidewalk surface maintenance
  - Improved crosswalks at intersection and mid-block locations as needed
  - Curb extensions/traffic calming at intersection and mid-block locations as needed
  - Maintenance and reinstallation of existing “paddle” crosswalk sign locations
  - New crosswalk of Sherman at Bolinas Road
  - New crosswalk of Bolinas Road at Mono Way
  - New crosswalk of Broadway near School Street; would require high visibility treatment and advance warning signs/beacons due to line of sight topography issues; thorough study recommended before implementing a new crosswalk in this area
  - Potential speed limit reduction if warranted by traffic study
- Sir Frances Drake crossing improvements – conceptual project that proposes improved crosswalks at intersection and mid-block locations, including the following potential improvements:
  - High-visibility crosswalks
  - Improved warning signage
  - In-pavement flashing crosswalk lights
  - Overhead flashing beacons

## Fairfax General Plan, Draft Town Center Element

The *Draft Town Center Element* is a special element of the Fairfax General Plan. It provides additional strategies and policies that are more specific to improvements in the downtown core, but are still consistent with, the Land Use and Circulation Elements of the larger plan. Key strategies, goals, and policies are provided below.

*Strategy TC-4:* Create a strategic action plan for the Town Center, including an urban design program for the Parkade and a parking improvement program.

*Policy TC-1:* New and/or renewed development in the Town Center Planning Area shall preserve and enhance the village character and pedestrian scale of the downtown area. Large, highly visible parking lots characteristic of strip shopping centers are inconsistent with village character.

*Policy TC-7:* Bicycle and pedestrian oriented development should be encouraged in the Town Center Planning Area.

*Policy TC-8:* Sir Francis Drake Boulevard should serve as the primary east-west artery through the Town of Fairfax, including the Town Center Planning Area. Provisions should be made to support Marin County's designated east-west bicycle corridor, which passes through Fairfax along Center and Broadway. Appropriate measures should be utilized to create safe pedestrian and bicycle crossings of Sir Francis Drake Boulevard and to enhance overall cohesiveness of the Town Center Planning Area.

*Policy TC-9:* Broadway and Center Boulevard, and Bolinas Road should serve as secondary routes through the Town, primarily for local traffic, and utilizing appropriate design features to ensure safe pedestrian crossings, bike use, and an overall pedestrian scale streetscape.

*Policy TC-10:* Shopping in the Town Center Planning Area should be made more attractive by creating safe and pleasant pedestrian routes, managing the parking supply for both cars and bicycles more efficiently, and developing and maintaining an attractive well-designed streetscape that encompasses landscaping and pedestrian amenities.

*Policy TC-11:* Bolinas Road should eventually become a pedestrian-only area from Broadway to Elsie Lane. Traffic would then be routed along the approximate route of the present Bank Street to Elsie Lane. Create safe pedestrian crossings between the Parkade and surrounding shops and services.

*Policy TC-12:* Any parking spaces removed as a result of streetscape related improvements should be replaced in appropriate locations and lots in the surrounding vicinity.

*Policy TC-22:* Consider creating a bicycle staging area including structure for bathrooms, showers and lockers, possibly in partnership with local businesses.

*TC-8.A:* The Town should consider bicycle and pedestrian crossing design and location as a priority along the Sir Francis Drake Boulevard corridor when developing the Land Use and Circulation Elements of the General Plan.

*TC-9.A:* The Town should consider bicycle and pedestrian crossing design and location as a priority along the Broadway and Center Boulevard corridor, and the section of Bolinas Road in the downtown area when developing the Land Use and Circulation Elements of the General Plan.

*TC-9.C:* Town staff should prepare a risk assessment for bicycle and pedestrian crossings along the Broadway and Center Boulevard corridor and the section of Bolinas Road in the downtown area.

*TC-10.C:* The Town should prepare a vehicle and bicycle-parking plan for the downtown area.

*TC-11.B:* The Town should prepare a risk assessment for pedestrian crossings between the Parkade and the surrounding shops and services on Broadway and Sir Francis Drake Boulevard.

*TC-12.B:* The Town should prepare a “no net loss” parking plan for the downtown area, including on-street and off-street spaces and lots.

## Appendix D

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### Alternative Considerations



## Alternative Considerations

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Based on analysis of the base traffic conditions, field reconnaissance, review of existing plans and documents, input received during the stakeholder process, and discussions with Town staff, the following alternatives were developed and evaluated. Each of the alternatives was developed to work within the existing curb-to-curb right-of-way of the study roadways. Key components of each alternative are summarized below.

### **Broadway – Reconfigure Travel Lanes**

- Reduce vehicular travel lanes from three to two
- Install Class II bike lanes connecting to existing bike lanes on Center Boulevard and extending west to Claus Drive
- Reallocate surplus right-of-way to pedestrian, streetscape, and parking uses

*Discussion:* Removal of one westbound travel lane would be expected to result in a surplus of approximately 11 feet of right-of-way, which could be redistributed to widen existing sidewalks, develop streetscape enhancements, and/or reconfigure on-street parking layouts. Special treatments such as colorized asphalt could be applied to the bike lanes for increased visibility within the corridor. Parking alternatives were considered that would provide for either a parallel or diagonal parking layout with the surplus right-of-way allocated to sidewalk improvements on both sides of Broadway. These alternatives were reviewed by staff and dismissed due to the need to maintain the two westbound lanes on Broadway that ultimately provide for a westbound left turn lane onto southbound Bolinas Road, and a through lane on Broadway to Claus Drive. The following sub-alternatives were considered:

#### Alternative 1a – Reconfigure Travel Lanes and Provide Diagonal Parking

- Reduce travel lanes from three to two
- Install Class II bike lanes
  - Alternative configuration would provide Shared Lane Markings adjacent to diagonal parking in the eastbound direction
- Convert existing parallel parking on the south side of the street to traditional or “back in” diagonal parking.

*Discussion:* Removal of one westbound travel lane would be expected to result in a surplus of approximately 11 feet of right-of-way. This alternative calls for the reallocation of surplus right-of-way to provide diagonal parking on the south side of the street between Bolinas Road and Pacheco Avenue. This would extend the diagonal parking pattern that exists between Claus Drive and Bolinas Road east on Broadway all the way to Pacheco Avenue. Converting existing parallel parking along this stretch to 45-degree diagonal parking would result in a gain of up to ten (10) new parking spaces on the south side of Broadway. Both traditional “pull-in” and “back-in” parking configurations were considered. Further, Shared Lane Markings (SLM) and colored pavement treatments were considered for the eastbound direction on Broadway adjacent to the diagonal parking as an alternative measure to minimize potential vehicle vs. bicycle conflicts associated with the parking layout.

### Alternative 1b – Reconfigure Travel Lanes, Provide Parallel Parking, and Increase Sidewalk Widths

- Reduce travel lanes from three to two
- Install Class II bike lanes
- Allocate surplus right-of-way to widen sidewalks on both sides of the street

*Discussion:* Removal of one westbound travel lane would be expected to result in a surplus of approximately 11 feet of right-of-way. This alternative called for reallocating the surplus right-of-way to sidewalk widening on both sides of Broadway, and re-distributing the remaining balance to improve ADA access to and widen the Parkade. This alternative would maintain existing parallel parking on the both sides of Broadway. The 11-foot surplus could be distributed in various ways. The initial concept called for adding four feet to the sidewalk on the south side of Broadway; this would provide approximately 14-foot wide sidewalks that could be used for amenities such as street furniture, landscaping, bike parking, and sidewalk dining. Of the remaining seven feet, two feet would be added to the sidewalk on the north side of Broadway to achieve a six-foot wide sidewalk, and the remaining five feet would be allocated to widen the Parkade.

### Alternative 1c – Reconfigure Pedestrian Access to the Parkade

- Replace eastern and middle stairwells to the Parkade with ADA ramps
- Construct sidewalk to close gap on the north side of Broadway
- Mark central crosswalk/pedestrian pathway through the Parkade

*Discussion:* To address the change in grade between Broadway and the Parkade, improve ADA access, and maximize efficiency, this alternative modifies sidewalks on the north side of Broadway to also serve as ramps to reach the Parkade. New sidewalks would ramp up to the Parkade to replace the existing stairwells opposite Peri's and the Theatre, which are not ADA compliant. The new sidewalks would transition from grade on Broadway, at the location of the existing stairwells, up to a central landing in the Parkade. ADA handrails would be required along the sidewalk ramps, and a central crosswalk would be marked through the Parkade leading from the ramp landing to the Sir Francis Drake crosswalk at Taylor Drive.

### **Sir Francis Drake Boulevard**

- Eliminate on-street parking on the south side of Sir Frances Drake Boulevard between Claus Drive and Pacheco Avenue
- Install Class II bike lanes on Sir Francis Drake Boulevard between Claus Drive and Pacheco Avenue

*Discussion:* This alternative would allow for continuous Class II bike lanes on Sir Francis Drake Boulevard through the Town of Fairfax. While local bicycle access would still be expected and provided for along Broadway, continuous bike lanes on Sir Francis Drake Boulevard would allow inter-city commuters and recreational riders to continue along the primary arterial in designated bike lanes without detouring onto Broadway. This alternative would close a gap in the regional bikeway network and potentially reduce the number of bicyclists that utilize the Claus Drive connection between Sir Francis Drake Boulevard and Broadway. Reducing the volume of bicyclists on this section could result in reduced congestion and fewer conflicts along this impacted connection, especially for student commuters and inexperienced riders.

The alternative would result in the elimination of ten on-street parallel parking spaces along the south side of Sir Francis Drake Boulevard between Claus Drive and Pacheco Avenue. However, observations indicate

that these spaces are not user-friendly since they are served by either no sidewalk or a very narrow sidewalk, and are located along a high volume arterial. Further, informal observations indicate that they are used less than 50 percent of the time during weekday business hours. Sir Francis Drake Boulevard would be re-striped to provide two 11.5-foot travel lanes, two five-foot bike lanes, and a seven-foot parking lane on the north side of the street. Minor curb work may be required to formalize the eastbound bus stop on Sir Francis Drake Boulevard and/or busses could pull out of the through lane and use the bike lane while loading/unloading. Under this second bus access option, signing, striping, and markings would be utilized to inform bicyclists of the shared bus pullout.

### **Mini-Roundabouts**

- Reconfigure the intersections at Broadway/Pacheco Avenue and Broadway/ Claus Drive with mini-roundabouts

*Discussion:* The potential to convert the intersections on Broadway at Pacheco Avenue and Claus Drive to mini-roundabouts was initially identified in the San Rafael to Fairfax Connector Study. Under this concept the existing “stop controls” at these intersections would be replaced with mini-roundabouts, which would allow vehicles and bicycles to proceed through the intersections in an orderly fashion and at low speeds, without the need to come to a complete stop. Mini-roundabouts would compliment the proposal to reduce the number of travel lanes on Broadway from three to two in order to provide bike lanes along the street segment, and would provide a shared, less-complicated circulation scheme at the intersections. Mini-roundabouts would be designed with a fully mountable center island to allow for easy access by emergency vehicles and large trucks, and would include painted splitter islands to achieve desired deflection and appropriate vehicle entry and exit speeds. A full compliment of markings and signage would accompany the treatment. While the potential for vehicle queuing was a concern, especially the movement from southbound Claus onto Broadway which has the ability to impact operations on Sir Francis Drake Boulevard, this alternative was dismissed by staff and therefore was not fully evaluated.