



**REGULAR MEETING OF THE
CITY OF CONCORD
PLANNING COMMISSION**

**Wednesday, May 7, 2014
7:00 p.m. – Council Chamber
1950 Parkside Drive, Concord**

Planning Commission Members:

Carlyn Obringer, Chair

John Mercurio, Vice Chair

Ernesto A. Avila, Commissioner

Robert Hoag, Commissioner

Tim McGallian, Commissioner

**REGULAR MEETING
7:00 p.m. – Council Chamber**

I. ROLL CALL

II. PLEDGE TO THE FLAG

III. PUBLIC COMMENT PERIOD

IV. ADDITIONS / CONTINUANCES / WITHDRAWALS

V. CONSENT CALENDAR

1. 4/16/14 Meeting Minutes

VI. PUBLIC HEARINGS

- 1. [Development Code Clean-Up Text Amendment \(PL131356 – DC, MC\)](#) – In July 2012, the City of Concord adopted a new comprehensive Development Code and certified a Supplemental Environmental Impact Report for the project which also included a number of amendments to the General Plan. This is a subsequent City initiated “clean-up” amendment to correct minor technical errors and inconsistencies, and to add clarifying language to the recently adopted code. This amendment does not contain changes to any of the major policy issues discussed at numerous study sessions and public hearings. The amendment does not specifically apply to any one property or zoning district. This amendment also adds two new use categories, Micro-Brewery/Micro-Distillery and Tasting Rooms and Food Vendor Group Sites, to the use tables, subject to an Administrative Permit or Minor Use Permit. Any application would also be subject to CEQA review for that specific site. Minor changes to the Vending section of the Municipal Code are also proposed to maintain consistency with the proposed Development Code changes regarding mobile food vendors.**

Pursuant to the California Environmental Quality Act, a Negative Declaration has been prepared for this project and will be considered concurrently. **Project Planner: Jason Hade @ (925) 671-3281.**

2. **Downtown Concord Specific Plan (PL14160 – GP)** – The City of Concord proposes to adopt the Downtown Concord Specific Plan. The Downtown Plan is a document that includes policies, measures and strategies to develop a defined geographic area. The Downtown Plan will serve as an economic development tool with the advantage of combining land use plan, specific zoning, context specific policies to address unique conditions and financing programs into one comprehensive package. The objectives of the Downtown Plan are to: 1) develop a Downtown vision; 2) provide a community engagement process to further the development of the Plan; 3) prepare goals, policies and implementation strategies to promote enhanced pedestrian and bicycle access to and from the BART Station, attractive high-density infill, incentives for affordable housing, and improved transit opportunities; and 4) develop strategies to spur new development. The Plan will leverage future state and regional grant funding toward the Downtown. Pursuant to the California Environmental Quality Act, an Addendum to the Final Supplemental Environmental Impact Report (SEIR) to the 2030 Concord General Plan EIR for the Concord Development Code has been prepared for this project and will be considered concurrently. **Project Planner: Joan Ryan @ (925) 671-3370.**

VII. COMMISSION CONSIDERATIONS

VIII. STAFF REPORTS / ANNOUNCEMENTS

IX. COMMISSION REPORTS / ANNOUNCEMENTS

X. FUTURE PUBLIC HEARING ITEMS

XI. ADJOURNMENT

NOTICE TO PUBLIC

ADA ACCOMMODATION

In accordance with the Americans With Disabilities Act and California Law, it is the policy of the City of Concord to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including those with disabilities. If you are disabled and require a copy of a public hearing notice, or an agenda and/or agenda packet in an appropriate alternative format; or if you require other accommodation, please contact the ADA Coordinator at (925) 671-3031, at least five (5) days in advance of the hearing. Advance notification within this guideline will enable the City to make reasonable arrangements to ensure accessibility.

APPEALS

Decisions of the Planning Commission on use permits, variances, major subdivisions, appeals taken from decisions of the Zoning Administrator or staff interpretations of the Zoning Code may be appealed to the City Council. Appeals and the required filing fee must be filed with the City Clerk within ten (10) days of the decision.

APPLICANT'S SUBMITTAL OF INFORMATION

Submittal of information by a project applicant subsequent to the distribution of the agenda packet but prior to the public hearing may result in a continuance of the subject agenda item to the next regularly scheduled Planning Commission meeting, if the Commission determines that such late submittal compromises its ability to fully consider and evaluate the project at the time of the public hearing.

CONSENT CALENDAR

All matters listed under CONSENT CALENDAR are considered by the Commission to be routing and will be enacted by one motion. There will be no separate discussion of these items unless requested by a Commissioner prior to the time Commission votes on the motion to adopt.

CORRESPONDENCE

Correspondence and writings received within 72 hours of the scheduled Planning Commission meeting that constitute a public record under the Public Records Act concerning any matter on the agenda is available for inspection during normal business hours at the Permit Center located at 1950 Parkside Drive, Concord. For additional information contact the Planning Division at (925) 671-3152.

HEARINGS

Persons who wish to speak on hearings listed on the agenda will be heard when the hearing is opened, except on hearing items previously heard and closed to public comment. Each public speaker should limit their comments to three (3) minutes or less. The Chair may grant additional time. The project applicant normally shall be the first person to make a presentation when a hearing is opened for public comment. The project applicant's presentation should not exceed ten (10) minutes unless the Chair grants permission for a longer presentation. After the public has commented, the item is closed to further public comment and brought to the Planning Commission level for discussion and action. Further comment from the audience will not be received unless requested by the Commission. No public hearing or hearing shall commence after 11:00 p.m. unless this rule is waived by majority vote of the Commission.

MEETING RECORDS

Cassette tapes and videotapes of each Planning Commission meeting are available for listening or viewing at the Planning Division office. Copies of the videotapes may be purchased. Contact the Planning Division Administrative Coordinator at (925) 671-3152 for further information.

NOTICE TO THE HEARING IMPAIRED

The Council Chamber is equipped with Easy Listener Sound Amplifier units for use by the hearing impaired. The units operate in conjunction with the Chamber's sound system. You may request the Easy Listener Phonic Ear Personal Sound Amplifier from the staff for personal use during Commission meetings.

ROUTINE AGENDA ITEMS AND CONTINUED ITEMS

All routine and continued items will be considered by the Planning Commission at the beginning of the meeting. There will not be separate discussions of these items unless a request is made prior to the time the Planning Commission considers the motions.

SPEAKER'S CARD

Members of the audience who wish to address the Planning Commission should complete a speaker's card available in the lobby or at the front bench. Submit the completed card to staff before the item is called, preferably before the meeting begins.

TELEVISED MEETINGS

All Planning Commission meetings are broadcast live on Astound Broadband channel 29 and Comcast channel 28. The meeting is replayed on the Thursday following the meeting at 8:00 a.m., 2:00 p.m. and 8:00 p.m. Replays are also broadcast on Fridays and Saturdays. Please check the City website, <http://www.cityofconcord.org/about/citynews/tvlistings.pdf> or check the channels for broadcast times.

NEXT PLANNING COMMISSION MEETINGS:

May 21, 2014: 7:00 pm – Council Chambers

June 4, 2014: 7:00 pm – Council Chambers

**REPORT TO PLANNING COMMISSION**

DATE: May 7, 2014

SUBJECT: Development Code Clean-Up Amendment (PL131356-DC, MC)

Recommendation: Adopt Resolution No. 14-08PC recommending City Council adoption of the Negative Declaration and Adopt Resolution No. 14-09PC recommending City Council adoption of the Development Code Clean-Up Amendment.

I. Background

On July 23, 2012, the City Council adopted a new Chapter 122 of the Concord Municipal Code, known as the "Development Code", which became effective on August 23, 2012. The intent of the Development Code was that it be an up to date, user-friendly document. Due to the size and scale of the project, it was expected that a number of amendments would be needed during the initial phase of implementation. It was recognized that certain Code provisions still needed further work, such as aspects of the sign regulations and vendor provisions. The First Development Code "Clean-Up" Amendment was reviewed by the Planning Commission on September 19, 2012 and adopted by the City Council on October 23, 2012. A Second Development Code Clean-Up Amendment was reviewed by the Planning Commission on July 17, 2013 and adopted by the City Council on September 24, 2013.

This is a subsequent Development Code Clean-Up Amendment clarifies certain provisions and includes new use categories for micro-breweries/distilleries and tasting rooms as well as mobile food vendors. These changes will further streamline permit processes and support the economic growth of the City of Concord by creating a permit process for these emerging new land uses which are not currently included in the Development Code.

II. California Environmental Quality Act (CEQA)

Staff prepared an Initial Study on the proposed amendment in accordance with the California Environmental Quality Act (CEQA). Based on the findings of the Initial Study, a Negative Declaration was recommended as the appropriate course of action. On March 21, 2014, a Notice of Intent to adopt a Negative Declaration (Exhibit B, Resolution 14-08PC, Attachment A) was filed with the Contra Costa County Clerk and published in the Contra Costa Times beginning a 20-day review period which ended on April 9, 2014, per CEQA requirements. The City did not receive any comments.

III. Discussion of Exhibit A

Exhibit A is a list of the proposed amendments, in legislative edit format that constitute the Development Code Clean-Up Amendment. These amendments are discussed individually, below, in

the same sequence as they appear in Exhibit “A”, except for related amendments, which are grouped together.

Article II. Zoning Districts – Uses and Standards

#1. Division 2. Table 122-78.1 Residential Districts - Allowed Uses and Permit Requirements

Food vendor group sites, micro-breweries/distilleries, and tasting rooms are excluded and prohibited within all residential zoning districts.

#2. Division 3. Table 122-131.1 North Todos Santos District - Allowed Uses and Permit Requirements

Food vendor group sites, micro-breweries/distilleries, and tasting rooms are excluded and prohibited within the North Todos Santos zoning district.

#3. Division 4. Table 122-131.1 Office and Commercial Districts - Allowed Uses and Permit Requirements

The proposed amendment would permit food vendor group sites within the Commercial Mixed Use, Neighborhood Commercial, Service Commercial, and Regional Commercial zoning districts subject to an approved Minor Use Permit.

Micro-breweries/distilleries under or equal to 3,000 square feet would be permitted within the Service Commercial and Regional Commercial zoning districts subject to an approved Minor Use Permit while tasting rooms would be allowed within these same zoning districts via an Administrative Permit. Footnote 11 indicates that micro-breweries/distilleries could exceed 3,000 square feet in size subject to an approved Use Permit.

Neither food vendor group sites nor micro-breweries/distilleries would be permitted within the Community Office zoning district.

Lastly, general personal services, such as tanning salons and barber and beauty shops, would be permitted via a Zoning Clearance in the Community Office zoning district as they currently are within all other commercial zoning districts.

#4. Division 5. Table 122-154.1 Downtown Districts - Allowed Uses and Permit Requirements

The proposed amendment would permit food vendor group sites within the Downtown Mixed Use and West Concord Mixed Use zoning districts subject to an approved Minor Use Permit. However, this use would not be permitted within the Downtown Pedestrian zoning district.

Micro-breweries/distilleries under or equal to 3,000 square feet would be permitted within all downtown zoning districts subject to an approved Minor Use Permit while tasting rooms would be allowed within these same zoning districts via an Administrative Permit. Footnote

14 indicates that micro-breweries/distilleries could exceed 3,000 square feet in size subject to an approved Use Permit.

Lastly, staff suggests permitting media production facilities on the ground floor by deleting the reference to footnote 1 for such uses.

#5. Division 6. Table 122-177.1 Business Park and Industrial Districts - Allowed Uses and Permit Requirements

As proposed, the amendment would permit food vendor group sites via an approved Administrative Permit within all business park and industrial zoning districts.

Micro-breweries/distilleries under or equal to 3,000 square feet would be authorized through an approved Minor Use Permit while tasting rooms would be permitted via an Administrative Permit in these same zoning districts.

As with the zoning districts identified above, footnote 11 would allow micro-breweries/distilleries to exceed 3,000 square feet with an approved Use Permit.

#6. Division 7. Table 122-200.1 Public/Quasi-Public Districts - Allowed Uses and Permit Requirements

Within the Public/Quasi-Public districts, food vendor group sites would be permitted via an Administrative Permit while micro-breweries/distilleries and tasting rooms would not be permitted.

#7. Division 8. Table 122-2023.1 Community Land Districts - Allowed Uses and Permit Requirements

Within the Community Land districts, only the Parks and Recreation zoning district would allow food vendor group sites through an Administrative Permit. Micro-breweries/distilleries and tasting rooms would not be permitted within the Community Land zoning districts.

Article IV. Development Standards

#8. Division 3. Parking, Loading, and Access Section 122-930(d)(a) Access to Landlocked Parcels

In order to achieve consistency with the current fire safe standards, the reference to a 14-foot wide travel surface would be deleted and deferred to a determination to be made by the Fire District.

Article V. Standards for Specific Uses

#9. Section 122-622 Food Vendor Group Sites

Staff is proposing that this new use be allowed on private property or on public sites such as at the BART station. The use would not be allowed on a full time basis and each permit approval would specify the number and types of vendors, specific days, and hours of operation. The permit would provide an opportunity to ensure the site could accommodate the use and set forth operating conditions. Each permit would be subject to specific conditions of approval, as appropriate for the site.

A food vendor group sites would be defined as sites with the stationary operation of one or more mobile food vendors clustered together on a single private or public property site during a specified time and in accordance with an approved permit. This new use section includes language which addresses location requirements, restrooms, hours of operation, site circulation, site conditions, security, the display and appearance of mobile food vendor units, and alcohol. Permit requirements and standard conditions of approval are also included.

As all other vendor sites and sales would need to continue to comply with the requirements in Concord Municipal Code Chapter 12.50 (Vendors), revised language is discussed below to maintain consistency with the proposed Development Code changes regarding mobile food vendors.

Article IX. Terms

Division 1. Section 122-1580 Use Classifications

#10. Eating and Drinking Establishments

The definition for a bar, night club, or lounge would be amended to delete the reference to “on-site consumption” and include a reference to the applicable California Department of Alcoholic Beverage Control (ABC) regulations. This would achieve consistency with the current ABC license provisions.

A new definition for the previously discussed micro-brewery/distillery would be included which addresses the size of such facilities, use requirements, compliance with ABC regulations, and outdoor seating areas. A tasting room definition is also included.

Concord Municipal Code

#11. Section 12.50.030 Vending Locations; permits and business licenses; vendor operations

The proposed minor changes shown in Exhibit A would update the City’s Municipal Code to reflect consistency with the proposed Development Code changes discussed above. Additionally, the proposed revision would remove the reference to the Downtown Business zoning district and replace it with a reference to the current Downtown Pedestrian zoning district.

IV. Fiscal Impact

The adoption of this Development Code Clean-Up Amendment will have a beneficial fiscal impact on the City by encouraging the location of new revenue-generating land uses to the City.

V. Public Contact

On December 4, 2013, staff conducted a study session regarding the proposed micro-brewery/distillery and tasting room regulations at which time the Planning Commission affirmed their support for the proposed revisions. On December 11, 2013, staff made a presentation to the Todos Santos Business Association concerning the proposed mobile food vendors Development Code changes and solicited their feedback via a brief survey. An open house was held on March 4, 2014 to obtain additional feedback from stakeholder groups regarding the proposed mobile food vendors regulations.

Notice of this hearing was published on a 1/8 page advertisement in the Contra Costa Times, as required by State Law and the Concord Municipal Code. Notice for this meeting has also been posted at the Civic Center.

VI. Summary and Recommendations

1. Adopt Resolution No 14-08PC recommending City Council adopt the Negative Declaration for the Development Code Clean-Up Amendment.
2. Adopt Resolution No 14-09PC recommending City Council adopt an Ordinance, approving the Development Code Clean-Up Amendment.

VII. Motion

CEQA Action

I (Comm. _____) hereby move that the Planning Commission adopt Resolution 14-08PC recommending City Council adoption of the Negative Declaration for the Development Code Clean-Up Amendment which was circulated for public review on March 21, 2014 with a review period through April 9, 2014. (Seconded by Comm. _____.)

Planning Action

I (Comm. _____) hereby move that the Planning Commission adopt Resolution 14-09PC recommending City Council adopt an Ordinance approving the Development Code Clean-Up Amendment. (Seconded by Comm. _____.)

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Exhibits:

- A - List of proposed amendments in legislative format
- B - PC Resolution 14-08 PC (Attachment 1: NOI, Attachment 2: Negative Declaration)
- C - PC Resolution 14-09 PC (Attachment 1: Exhibit A to this Staff Report)

Development Code Amendment List of Revisions

May 7, 2014

- 1) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 2 Residential Districts (RR, RS, RL, RM, and RH)), Table 122-78.1 (Residential Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Residential Uses; Office, Commercial, and Retail Services; and Open Space and Agricultural Uses; Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-78.1 Residential Districts Allowed Uses and Permit Requirements						ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- - Use Not Allowed
Land Use Classifications	Permit Required by District					Additional Requirements
	RR	RS	RL	RM	RH	
Office, Commercial, and Retail Services						
Eating and Drinking Establishments						
Food Vendor Group Site	--	--	--	--	--	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	--	--	--	--	--	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large	--	--	--	--	--	§122-617 Alcoholic Beverage Sales
Tasting Room	--	--	--	--	--	§122-617 Alcoholic Beverage Sales

- 2) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 3 North Todos Santos District (NTS), Table 122-1031.1 (North Todos Santos District - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-131.1 North Todos Santos District Allowed Uses and Permit Requirements		ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- Use Not Allowed
Land Use Classifications	Permit Required by District	Additional Requirements
	NTS	
Office, Commercial, and Retail Services		
Eating and Drinking Establishments		
Food Vendor Group Site	--	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	--	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large	--	§122-617 Alcoholic Beverage Sales
Tasting Room	--	§122-617 Alcoholic Beverage Sales

- 3) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 4 Office and Commercial Districts (CO, CMX, NC, SC, RC), Table 122-131.1 (Office and Commercial Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-131.1 Office and Commercial Districts Allowed Uses and Permit Requirements						ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- Use Not Allowed
Land Use Classifications	Permit Required by District					Additional Requirements
	CO	CMX	NC	SC	RC	
Office, Commercial, and Retail Services						
Eating and Drinking Establishments						
Food Vendor Group Site	--	MP	MP	MP	MP	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	--	--	--	MP	MP	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large⁽¹¹⁾	--	--	--	UP	UP	§122-617 Alcoholic Beverage Sales
Tasting Room	--	--	--	AP	AP	§122-617 Alcoholic Beverage Sales
Personal Services						
General	-- ZC	ZC	ZC ⁽³⁾	ZC ⁽³⁾	ZC ⁽³⁾	

- (1) Not allowed on ground floor.
- (3) Allowed to occupy up to 20 % gross area of shopping center or multi-tenant building or 20% street frontage of one building.
- (5) No outdoor facilities, storage, or activities are allowed.
- (9) Requires a minimum lot size of 10,000 sq. ft.
- (10) Allowed with residential use only.
- [\(11\) A facility which exceeds 3,000 square feet.](#)

- 4) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 5 (Downtown Districts (DP, DMX, WMX), Table 122-154.1 (Office and Commercial Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-154.1 Downtown Districts Allowed Uses and Permit Requirements				ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- - Use Not Allowed
Land Use Classifications	Permit Required by District			Additional Requirements
	DP	DMX	WMX	
Office, Commercial, and Retail Services				
Eating and Drinking Establishments				
Food Vendor Group Site	-	MP	MP	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	MP	MP	MP	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large⁽¹⁾	UP	UP	UP	§122-617 Alcoholic Beverage Sales
Tasting Room	AP	AP	AP	§122-617 Alcoholic Beverage Sales
Media Production Facility	ZC ⁽⁴⁾	ZC	ZC	

- (1) Not allowed on ground floor.
- (2) Allowed on upper floors subject to Use Permit Approval.
- (3) Allowed to occupy up to 20 % gross area of shopping center or multi-tenant building or 20% street frontage of one building.
- (7) Allowed on ground floor subject to Minor Use Permit approval.
- (8) Allowed on upper floors subject to an Administrative Permit approval.

- (10) Allowed with residential use only.
- (14) [A facility which exceeds 3,000 square feet.](#)

5) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 6 Business Park and Industrial Districts (OBP, IBP, IMX, HI), Table 122-177.1 (Business Park and Industrial Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-177.1 Business Park and Industrial Districts Allowed Uses and Permit Requirements					ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- - Use Not Allowed
Land Use Classifications	Permit Required by District				Additional Requirements
	OBP	IBP	IMX	HI	
Office, Commercial, and Retail Services					
Eating and Drinking Establishments					
Food Vendor Group Site	AP	AP	AP	--	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	MP	MP	MP	--	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large ⁽¹¹⁾	UP	UP	UP	--	§122-617 Alcoholic Beverage Sales
Tasting Room	AP	AP	AP	--	§122-617 Alcoholic Beverage Sales

- (3) Allowed to occupy up to 20% of: gross area of shopping center, multi-tenant building or 20% street frontage of one building.
- (4) Outdoor sales, activities, or storage allowed inside or rear yards when enclosed by an eight-foot tall masonry wall and materials do not exceed wall height.
- (5) No outdoor facilities, storage, or activities are allowed.
- (6) Allowed if occupying less than 80,000 square feet of gross floor area.
- (10) Allowed with residential use only.
- (11) [A facility which exceeds 3,000 square feet.](#)

6) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 7 Public/Quasi-Public Districts (PQP), Table 122-280.1 (Public/Quasi-Public Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-200.1 Public/Quasi-Public Districts Allowed Uses and Permit Requirements		ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- - Use Not Allowed
Land Use Classifications	Permit Required by District	Additional Requirements
	PQP	
Office, Commercial, and Retail Services		
Eating and Drinking Establishments		
Food Vendor Group Site	AP	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	--	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large	--	§122-617 Alcoholic Beverage Sales
Tasting Room	--	§122-617 Alcoholic Beverage Sales

- 7) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 8 Community Land Districts (OS, PR, RLC, AND WRC), Table 122-280.1 (Community Land Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-223.1 Community Land Districts Allowed Uses and Permit Requirements					ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- - Use Not Allowed
Land Use Classifications	Permit Required by District				Additional Requirements
	OS	PR	RLC	WRC	
Office, Commercial, and Retail Services					
Eating and Drinking Establishments					
Food Vendor Group Site	--	AP	--	--	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	--	--	--	--	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large	--	--	--	--	§122-617 Alcoholic Beverage Sales
Tasting Room	--	--	--	--	§122-617 Alcoholic Beverage Sales

- 8) *Development Code, Article IV. Development Standards, Division 3. Parking, Loading, and Access, Section 122-930(d)(5)a. Access to Landlocked Parcels is amended as follows:*

(5) **Access to Landlocked Parcels.** Access to landlocked parcels without direct frontage on a public or private street may be created for up to four lots or parcels if the developer or property owner records an access easement that meets the following conditions:

- a. Access to one lot, [serving no more than two dwelling units](#), shall be at least 16 feet wide, [\(with including a 14-foot-wide travel surface of a width to be determined by the Fire District\)](#), connecting the landlocked parcel to a public or private street through an intervening lot or parcel. The easement shall provide emergency access with no parking;

- 9) *Development Code, Article V. Standards for Specific Uses, Division 1. Standards for Specific Uses, add new Section 122-622 "Food Vendor Group Sites", as follows:*

122-622 Food Vendor Group Sites

Where allowed by Article II (Zoning Districts – Uses and Standards), Food Vendor Group Sites shall comply with the requirements of this section.

(a) **Purpose.** This Section provides standards for Food Vendor Group Sites, established on private or public property, where allowed by Article II (Zoning Districts - Uses and Standards). Food vendors can bring vitality, pedestrian activity, and spillover economic activity to the surrounding areas while protecting the health, safety, convenience, prosperity, and general welfare of the city and surrounding businesses. It is the intent of these regulations to assure a minimum level of cleanliness, quality, and security.

(b) **Applicability**

- (1) This section shall only apply to Food Vendor Group Sites, which are sites with the stationary operation of one or more mobile food vendors clustered together on a single private or public property site during a specified time and in accordance with an

approved permit. All other vendor sites and sales shall comply with the provisions in Concord Municipal Code (CMC) Vendor Ordinance Sections 12.50.010 through 12.50.040.

- (2) Notwithstanding the provisions in this section, all vendors shall also comply with the requirements in CMC Sections 12.50.010 through 12.50.040.

(3)

(c) **Definition**

- (1) **Food Vending.** The sale of prepared foods from a food vendor unit. Food vending activities may include, but are not limited to, the following:

- a. The sale of food prepared off-site in a commercial kitchen and/or prepared on-site within the food vendor unit kitchen, per Contra Costa County Health Regulations.
- b. Food ordered and served from the food vendor unit.
- c. Take-out counter and space for customer queuing.
- d. Prepared food served in disposable wrappers, plates, or containers and sold for on-site or off-site consumption.

- (2) **Food Vendor Unit.** A mobile truck, trailer, vendor cart, or other movable wheeled equipment or vehicle from which food vending occurs.

- (3) **Food Vendor.** A person who is engaged in food vending.

- (4) **Food Vendor Group Site.** A site approved for a specified number of food vendors, where allowed by Article II (Zoning Districts Uses and Standards), for a specific duration and frequency and subject to specific conditions of approval.

- (5) **Food Vendor Group Site Operator.** The individual directly responsible for organizing and/or conducting the Food Vendor Group Site and/or the facility manager, or respective designee, for the purpose of determining liability for damage to City or public facilities as a result of a food vendor group site.

(d) **General Requirements**

- (1) **Location.** Food Vendor Group Sites shall be located a minimum distance of 100 feet from the following (as measured in a straight line from the property line of the Food Vendor Group Site to the nearest property line of the following):

- a. **Schools.** Any public school, unless specifically authorized by the School District, indicating that the school has no objections to the proposed Food Vendor Group Site locating on school grounds or within 100 feet of the school grounds.
- b. **Parks.** Any public park or recreation area unless specifically authorized by the City.
- c. **Restaurants.** Any Full Service, Limited Service, or Drive through, restaurant, unless specifically authorized by the restaurant.
- d. **Any Bar, Nightclub, Lounge.**

- (2) **Restrooms.** Food Vendor Group Sites shall be located within 200 feet of an available functioning restroom facility, which is available for the vendors and their employees.

and customers, unless otherwise set forth in the permit approval for the Food Vendor Group Site.

- (3) **Hours of Operation.** Food Vendor Group Site activities shall not be conducted before 7:00 a.m. or after 9:00 p.m., any day of the week, and all vendor units shall be cleared from the site by 10:00 p.m., unless otherwise set forth in the permit approval for the Food Vendor Group Site.

(4) **Site Circulation**

- a. Food vendor units shall not impede circulation, block driveways, drive aisles, parking, or other site improvements which are required for other businesses
- b. Food Vendor Group Sites shall not locate or block parking spaces which serve as required parking for any other business or use on the property;
- c. Each food vendor unit at a Food Vendor Group Site shall be sited in a manner to insure that the customer queue maintains a minimum five feet of unobstructed clear path along any public sidewalk or right-of-way when the service window faces the street or sidewalk.
- d. Safe and adequate parking shall be provided for customers of the Food Vendor Group Site, the number of spaces and the layout shall be submitted with the application for a Food Vendor Group Site.

- (5) **Site Conditions.** The Food Vendor Group Site operator shall be responsible for the improvement, maintenance, and compliance with the conditions of approval, as follows:

- a. Installation of improvements and maintenance of the site, adjacent right-of-way, and properties within 100 feet of the site in a safe, litter free, and clean manner at all times.
- b. Installation of paving of all areas of the site to be used by vendor units and as needed for parking, shall be paved.
- c. Installation and maintenance of adequate lighting to ensure vendor and customer safety. All lighting shall be directed downwards and away from adjacent properties and public streets.
- d. On-going arrangements and costs for the collection and disposal of waste and trash after each Food Vendor Group Site event.
- e. The layout of the Food Vendor Group Site shall comply with the approved permit and maintain site circulation and access consistent with the Americans with Disabilities Act (ADA).
- f. Installation, maintenance, and storage of other site amenities such as tables and chairs, portable restroom facilities, and/or temporary shade structures, as required.

- (6) **Security.** The Food Vendor Group Site operator shall ensure that adequate safety and security measures are implemented.

(7) **Display and Appearance of Mobile Food Vendor Units**

- a. Each food vendor unit shall display a current business license and current health department permit in plain view, as required by the health department.
 - b. Food vendor units shall be maintained in movable condition at all times.
 - c. Each food vendor shall provide at least one 32 gallon trash receptacle within 15 feet of their food vendor unit.
- (8) **Alcohol.** The serving or consumption of alcohol is prohibited at Food Vendor Group Sites.
- (e) **Permit requirements.** Where allowed by Article II (Zoning Districts – Uses and Standards), an Administrative Permit or Minor Use Permit shall be required, in accordance with Article VII. (Permits and Permit Requirements).
- (f) **Conditions of Approval.** In addition to the requirements in this section, additional conditions may be required as determined necessary to protect the public health, safety, welfare, and order, and to minimize adverse impacts upon the surrounding neighborhood and the general community. Additional conditions may be added to address noise, lighting, odors, or smoke. The following conditions shall apply to all Food Vendor Group Sites:
- (1) No more than one Food Vendor Group Site shall be allowed on any single property.
 - (2) Any exterior storage of refuse, equipment, or materials associated with the Food Vendor Group Site and each food vendor unit shall be prohibited on the site except during operating hours.

10) *Development Code, Article IX General Terms, Division 1. Use Classifications, Section 122-1580 Use Classifications, is amended as follows:*

Eating and Drinking Establishments

Bar, Night Club, Lounge. An establishment that sells beer, wine, and distilled spirits in accordance with applicable California Department of Alcoholic Beverage Control regulations, ~~on-site consumption~~ and may include live entertainment.

Micro-Brewery/Micro-Distillery. A facility for the production and packaging of alcoholic beverages for distribution, retail, or wholesale, on or off premises and which meets all applicable California Department of Alcoholic Beverage Control regulations. Outdoor eating areas shall be permitted as an accessory use to a micro-brewery/micro-distillery consistent with Section 122-632, Sidewalk Cafes and Outdoor Eating Areas.

Restaurant, Full Service. A restaurant that prepares food, may include alcoholic drinks, and serves seated customers who select food from a menu. Take out service is optional and may not be available.

Restaurant, Limited Service. An establishment that prepares food or sells packaged food for on-site consumption, take out, or delivery. Typically customers self-serve or are served partially. This classification includes cafeterias, delicatessens, fast-food restaurants, sandwich shop, pizza parlors, snack bars, takeout restaurants, and catering businesses or bakeries that have a storefront restaurant component.

Restaurant with Drive-Through. A restaurant where food or coffee type beverages may be purchased by motorists who remain in their vehicles during the sales transaction.

Restaurant with Live Entertainment. A full service or limited service restaurant that also provides live music, a disc jockey, karaoke, dancing to live or recorded music, and/or comedy or theatrical performances to patrons. This classification does not include coin-operated music player machines, i.e., jukeboxes, or other recorded music.

Tasting Room. A facility allowing on-site tasting of alcoholic beverages and retail sales directly to the public and possessing the appropriate California Department of Alcoholic Beverage Control license type. The tasting room may be operated within a micro-brewery/micro-distillery facility, accessory to a separate on-site use, or as a stand-alone retail use. Outdoor eating areas shall be permitted as an accessory use to a tasting room consistent with Section 122-632, Sidewalk Cafes and Outdoor Eating Areas.

11) *Concord Municipal Code Section 12.50.030 is amended as follows:*

Chapter 12.50 Vendors

Sec. 12.50.030. Vending locations; permits and business licenses; vendor operations.

(a) Authority to vend on public or private property. A vendor may be permitted to operate only at public and private property authorized by this section, subject to first obtaining a written city permit. This section does not apply to a vendor on public property not owned by the city if permission to vend has been granted by the property owner or on private property where permission to vend has been granted by city permit.

(1) Vendor motor vehicles. On private property, which is not an approved Food Vendor Group Site, vendor motor vehicles are allowed only at construction sites. Such vehicles may stop at a construction site for no more than 30 minutes without moving to a new location at least 300 feet removed therefrom. Such vehicles may not return to a location where they have previously stopped to vend within the previous three hours.

(2) Nonmotorized carts. Vendor carts are allowed on private property only pursuant to a city ~~use~~-administrative permit or ~~Zoning Administrator's~~ minor use permit. Vendor carts are allowed on construction sites only pursuant to an administrative ~~occupancy~~ permit. The approving authority may impose reasonable conditions as provided in subsection (g)(2). At construction sites on private property, vendor carts may stop for no more than 30 minutes without moving to a new location at least 300 feet removed therefrom. Such carts may not return to a location where they have been previously stopped to vend within the previous three hours.

(3) Vendors prohibited in Downtown ~~Business~~ Pedestrian Zoning District. Vendors shall not be permitted to operate at any publicly owned location in the Downtown ~~Business~~ Pedestrian Zoning District except as authorized by section 90-103(b)(2) pursuant to a valid minor use permit.

1 **BEFORE THE PLANNING COMMISSION**
2 **OF THE CITY OF CONCORD,**
3 **COUNTY OF CONTRA COSTA, STATE OF CALIFORNIA**

4 **A RESOLUTION RECOMMENDING CITY**
5 **COUNCIL ADOPTION OF THE NEGATIVE**
6 **DECLARATION FOR DEVELOPMENT**
7 **CODE CLEAN-UP AMENDMENT**
8 **(PL131356-DC, MC)**

Resolution No. 14-08PC

9 **WHEREAS**, the City of Concord adopted the 2030 Urban Area General Plan on October 2,
10 2007; and

11 **WHEREAS**, the City of Concord concurrently certified the Final Environmental Impact
12 Report for the 2030 Urban Area General Plan on October 2, 2007; and

13 **WHEREAS**, the City of Concord amended the 2030 General Plan on January 24, 2012 to
14 incorporate an Area Plan for the Concord Reuse Project; and

15 **WHEREAS**, the City of Concord certified a Final Environmental Impact for the Concord
16 Reuse Project Plan in February 2010 and an Addendum to that FEIR which covered the Area Plan and
17 related 2030 General Plan Amendment on January 24, 2012; and

18 **WHEREAS**, the General Plan FEIR and Reuse Plan FEIR/Addendum together constitute a
19 comprehensive evaluation of the environmental impacts of the Concord General Plan; and

20 **WHEREAS**, on July 10, 2012, the City Council certified the Concord Development Code
21 Final Supplemental Environmental Impact Report and Mitigation Monitoring and Reporting Program,
22 and adopted the Findings and the Statement of Overriding Considerations; and

23 **WHEREAS**, on July 24, 2012, the City Council adopted Chapter 122 of the Concord
24 Municipal Code (“Development Code”), to ensure consistency with General Plan policies, and an
25 update of its zoning maps to ensure consistency with the adopted General Plan Map; and

26 **WHEREAS**, on October 9, 2012, the City Council adopted Resolution 12-74, adopting a
27 Negative Declaration for the First Development Code Clean-Up Amendment; and

28 **WHEREAS**, on September 24, 2013, the City Council adopted Resolution 13-71, adopting a
29 Negative Declaration for the Second Development Code Clean-Up Amendment; and

30 **WHEREAS**, the City has proposed additional text amendments to the Development Code in

1 the form of the proposed Development Code Clean-Up Amendment P1131356-DC, MC
2 (“Amendment”) attached to the May 7, 2014 staff report as Exhibit “A” and incorporated by
3 reference, in order to improve the accuracy of the Development Code and its standards and further
4 achieve internal consistency and consistency with the rest of the Concord Municipal Code; and

5 **WHEREAS**, on March 21, 2014 the City conducted an Initial Study pursuant to the California
6 Environmental Quality Act of 1970, Public Resources Code § 21000, et seq., as amended and
7 implementing State CEQA Guidelines, Title 14, Chapter 3 of the California Code of Regulations
8 (collectively, “CEQA”) to determine if the Amendment would have any significant effect on the
9 environment; and

10 **WHEREAS**, the Initial Study concluded that the Amendment would have no significant
11 environmental impacts; and

12 **WHEREAS**, on March 21, 2014 a Notice of Intent to Adopt a Negative Declaration (“NOI”)
13 was prepared, posted with the Contra Costa County Clerk, and circulated for a 20 day public review
14 period, through April 9, 2014, in accordance with CEQA; a copy of the NOI is attached hereto as
15 Attachment A and incorporated by reference; and

16 **WHEREAS**, the Initial Study and Negative Declaration (collectively, “Negative Declaration”)
17 is attached hereto as Attachment B and is hereby incorporated by reference; and

18 **WHEREAS**, no comments were received from the public during the public review period; and

19 **WHEREAS**, the Planning Commission, after giving all public notices required by State law
20 and the Concord Municipal Code, held a duly noticed public hearing on May 7, 2014 to consider the
21 Amendment and the Negative Declaration; and

22 **WHEREAS**, at such public hearing, the Planning Commission considered all testimony and
23 information received at the public hearing, the oral report from City staff, the written report from City
24 staff, dated May 7, 2014, exhibits presented, pertinent plans and documents, the Negative Declaration,
25 and other materials and information contained in the record of proceedings relating to the
26 Amendment, which are maintained at the offices of the City of Concord Planning Division
27 (collectively, “Environmental Information”).
28

1 **NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:**

- 2 1. The Planning Commission does hereby make the following findings:
- 3 a. The recitals above are true and correct and are incorporated herein by reference.
- 4 b. The Negative Declaration is the appropriate environmental document for the
- 5 Amendment.
- 6 c. The environmental documents for the Amendment have been prepared, published,
- 7 circulated, and reviewed in accordance with CEQA.
- 8 d. The Planning Commission has reviewed, considered, and evaluated all of the
- 9 Environmental Information.
- 10 e. The Negative Declaration reflects the independent judgment and analysis of the City as
- 11 the lead agency for the Amendment.
- 12 f. There is no substantial evidence in light of the whole record before the Planning
- 13 Commission that the Amendment will have a significant effect on the environment.
- 14
- 15 2. The Planning Commission does hereby recommend that the City Council adopt the Negative
- 16 Declaration as part of its consideration and approval of the Amendment.

17 This resolution shall become effective immediately upon its passage and adoption.

18 **PASSED AND ADOPTED** this 7th day of May, 2014, by the following vote:

19 **AYES:**

20 **NOES:**

21 **ABSTAIN:**

22 **ABSENT:**

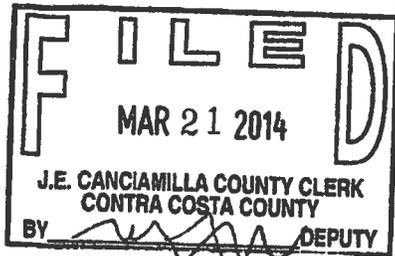
23

24 _____
Carol Johnson, AICP
Secretary to the Planning Commission

25

26 Attachments:

- 27 A. NOI
- 28 B. Negative Declaration



**NOTICE OF INTENT TO ADOPT A
NEGATIVE DECLARATION**
California Environmental Quality Act



CITY OF CONCORD
Community Development Dept.
1950 Parkside Drive, MS/53
Concord CA 94519

PHONE: (925) 671-3152
FAX: (925) 671-3381

Pursuant to the State of California Public Resources Code and the "Guidelines for Implementation of the California Environmental Quality Act of 1970" as amended to date, this is to advise you that the City of Concord has prepared an initial study and intends to adopt a Negative Declaration for the following project.

PROJECT

Development Code Clean-Up Amendment

LOCATION/ADDRESS

City of Concord

PROJECT DESCRIPTION

In July 2012, the City of Concord adopted a new comprehensive Development Code and certified a Supplemental Environmental Impact Report for the project which also included a number of amendments to the General Plan. This is a subsequent City initiated "clean-up" amendment to correct minor technical errors and inconsistencies, and to add clarifying language to the recently adopted code. This amendment does not contain changes to any of the major policy issues discussed at numerous study sessions and public hearings. The amendment does not specifically apply to any one property or zoning district. This amendment also adds two new use categories, Micro-Brewery/Micro-Distillery and Tasting Rooms and Food Vendor Group Sites, to the use tables, subject to an Administrative Permit or Minor Use Permit. Any application would also be subject to CEQA review for that specific site. Minor changes to the Vending section of the Municipal Code are also proposed to maintain consistency with the proposed Development Code changes regarding mobile food vendors.

PUBLIC COMMENT PERIOD

From March 21, 2014 to April 9, 2014, the public and all affected agencies are hereby invited to review the Negative Declaration and Initial Study Checklist and submit written comments. Comments must be submitted by April 9, 2014 at 5:00 p.m. Comments can be mailed, faxed, or emailed.

DOCUMENT AVAILABILITY

The Negative Declaration and Initial Study Checklist and other supporting environmental documents are available for public review at the City of Concord Permit Center, Planning Division, located at 1950 Parkside Drive, Building D, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday excluding holidays. The document may also be accessed on the City's website during the public comment period at <http://www.cityofconcord.org/citygov/dept/planning/>.

CONTACT PERSON AND PHONE NUMBER

Carol Johnson, AICP, Planning Manager
(925) 671-3369
City of Concord
1950 Parkside Drive, MS/53
Concord, CA 94519
Fax: (925) 671-3381
E-Mail: carol.johnson@cityofconcord.org

PLANNING COMMISSION PUBLIC HEARING 7:00 p.m. – May 7, 2014

The proposed Development Code Clean-Up Amendment and Negative Declaration will be considered by the City of Concord Planning Commission, for recommendation to the City Council.

Signature

Date



NEGATIVE DECLARATION
California Environmental Quality Act

Based on the attached Initial Study and Environmental Checklist, the City of Concord has determined that the following project does not require preparation of an environmental impact report because it will not have a significant effect on the environment.

The reasons supporting this finding and the Negative Declaration are discussed further in the Initial Study.

PROJECT

Development Code Clean-Up Amendment

LOCATION/ADDRESS

City of Concord

APPLICANT

City of Concord

PROJECT DESCRIPTION

In July 2012, the City of Concord adopted a new comprehensive Development Code and certified a Supplemental Environmental Impact Report for the project which also included a number of amendments to the General Plan. This is a subsequent City initiated "clean-up" amendment to correct minor technical errors and inconsistencies, and to add clarifying language to the recently adopted code. This amendment does not contain changes to any of the major policy issues discussed at numerous study sessions and public hearings. The amendment does not specifically apply to any one property or zoning district. This amendment also adds two new use categories, Micro-Brewery/Micro-Distillery and Tasting Rooms and Food Vendor Group Sites, to the use tables, subject to an Administrative Permit or Minor Use Permit. Any application would also be subject to CEQA review for that specific site. Minor changes to the Vending section of the Municipal Code are also proposed to maintain consistency with the proposed Development Code changes regarding mobile food vendors.

Additional project details are described in the Initial Study.

NEGATIVE DECLARATION PREPARED BY

City of Concord
Community and Economic Development
1950 Parkside Drive, MS/53
Concord, CA 94519

Contact: Carol Johnson, AICP
Title: Planning Manager
Telephone: (925) 671-3369
Fax: (925) 671-3381

Signature

Date

Initial Study and Environmental Checklist

California Environmental Quality Act



-
1. Project Title: **Development Code Clean-Up Amendment**
 2. Lead Agency Name and Address: **City of Concord
1950 Parkside Drive, MS/53
Concord, CA 94519**
 3. Contact Person and Phone Number: **Carol Johnson, AICP
Planning Manager
925-671-3369**
 4. Project Location: **Citywide**
 5. Project Sponsor's Name and Address: **City of Concord**
 6. General Plan Designation: **N/A (Citywide)**
 7. Zoning: **N/A (Citywide)**
 8. Description of Project:
In July 2012, the City of Concord adopted a new comprehensive Development Code and certified a Supplemental Environmental Impact Report for the project which also included a number of amendments to the General Plan. This is a subsequent City initiated "clean-up" amendment to correct minor technical errors and inconsistencies, and to add clarifying language to the recently adopted code. This amendment does not contain changes to any of the major policy issues discussed at numerous study sessions and public hearings. The amendment does not specifically apply to any one property or zoning district. This amendment also adds two new use categories, Micro-Brewery/Micro-Distillery and Tasting Rooms and Food Vendor Group Sites, to the use tables, subject to an Administrative Permit or Minor Use Permit. Any application would also be subject to CEQA review for that specific site. Minor changes to the Vending section of the Municipal Code are also proposed to maintain consistency with the proposed Development Code changes regarding mobile food vendors.
 9. Surrounding Land Uses and Setting (Briefly describe the project's surroundings):
N/A (Citywide)
 10. Other agencies whose approval may be required (e.g. permits, financing approval, or participation agreement.):
None.

Environmental Factors Potentially Affected:

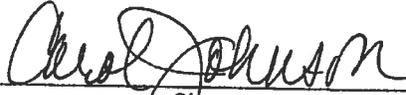
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Agriculture and Forest Resources | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Utilities/Service Systems |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Mandatory Findings of Significance |
| <input type="checkbox"/> Geology/Soils | <input type="checkbox"/> Population/Housing | <input checked="" type="checkbox"/> None |

Determination:

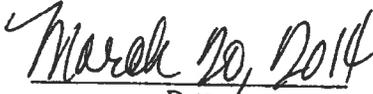
On the basis of this initial study:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature
Carol Johnson, AICP

Printed Name



Date
March 20, 2014

Date

Evaluation of Environmental Impacts:

Issues:

	Summary of Impacts			
	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
II. AGRICULTURE AND FOREST RESOURCES -- Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined by Public Resources Code section 4526)?				X
d) Results in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
III. AIR QUALITY -- Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative threshold for ozone precursors)?				X
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				

	Summary of Impacts			
	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCE -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X

	Summary of Impacts			
	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less than Significant Impact	No Impact
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?				X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
VII. GREENHOUSE GAS EMISSIONS -- Would the project:				
a) Generate greenhouse gases, either directly or indirectly, that may have a significant impact on the environment?				X
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
VIII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or				

	Summary of Impacts			
	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less than Significant Impact	No Impact

food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.

IX. HYDROLOGY AND WATER QUALITY -- Would the project:

a) Violate any water quality standards or waste discharge requirements?				X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?				X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structure to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.

X. LAND USE AND PLANNING -- Would the project:

a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.

XI. MINERAL RESOURCES -- Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource				X

	Summary of Impacts			
	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less than Significant Impact	No Impact
recovery site delineated on a local general plan, specific plan or other land use plan?				
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
XII. NOISE -- Would the project:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies including standard conditions of approval regarding hours of operation intended to address potential noise impacts. No impacts would occur.				
XIII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
XIII. PUBLIC SERVICES -- Would the project:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				X
Fire protection?				X
Police protection?				X

	Summary of Impacts			
	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less than Significant Impact	No Impact
Schools?				X
Parks?				X
Other public facilities?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. Moreover, a 100-foot buffer would be required between schools and food vendor group sites. No impacts would occur.				
XV. RECREATION -- Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
XVI. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
XVII. UTILITIES AND SERVICES SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of a new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or				X

	Summary of Impacts			
	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporation	Less than Significant Impact	No Impact
may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
b) Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X
Discussion: The project includes a series of technical corrections and clarification to the City's Development Code provisions and does not include any physical improvements to properties in the City. Future micro-brewery/micro-distillery or tasting rooms, or food vendor group sites would be subject to an Administrative or Minor Use Permit to ensure compliance with the City's policies. No impacts would occur.				

Exhibits:

- A) List of Proposed Code Amendments (incorporated by reference, on file with the Planning Division, Attn: Jason Hade at 1950 Parkside Drive, Concord, CA 94519)
- B) Final Supplemental Environmental Impact Report for the Development Code Project SCH#20060062093 (incorporated by reference, document on file at the Concord Planning Division at 1950 Parkside Drive, Concord, CA 94519)

1 **WHEREAS**, the Planning Commission, after giving all public notices required by State Law
2 and the Concord Municipal Code, held a duly noticed public hearing on May 7, 2014, on the proposed
3 Amendment and the Initial Study and Negative Declaration (collectively, “Negative Declaration”; the
4 Negative Declaration is Attachment 2 to Resolution 14-08PC, and is hereby incorporated by
5 reference); and

6 **WHEREAS**, the Planning Commission has reviewed the proposed Amendment; and

7 **WHEREAS**, prior to recommending that the City Council act on the Amendment, on May 7,
8 2014, the Planning Commission adopted Resolution No. 14-08 PC, recommending that the City
9 Council adopt the Negative Declaration, which resolution is hereby incorporated by reference; and

10 **WHEREAS**, on May 7, 2014, the Planning Commission, after consideration of all pertinent
11 plans, documents, and testimony, declared their intent to recommend approval of the Amendment.

12 **NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:**

- 13 1. The Planning Commission does hereby make the following findings:
- 14 a. The recitals above are true and correct and are incorporated herein by reference.
- 15 b. The proposed Amendment is consistent with the policies in the 2030 General Plan and
16 is necessary in order to improve the accuracy of the Development Code and its
17 standards and further achieve internal consistency and consistency with the rest of the
18 Concord Municipal Code.
- 19 c. The proposed Amendment would not be detrimental to the public interest, health,
20 safety, convenience, or welfare of the City.
- 21 2. The Planning Commission does hereby recommend that the City Council adopt an Ordinance
22 to approve the Amendment, consistent with the revisions in Exhibit A to the May 7, 2014,
23 Planning Commission Staff Report.

24 This resolution shall become effective immediately upon its passage and adoption.

25 **PASSED AND ADOPTED** this 7th day of May, 2014 by the following vote:

26 **AYES:**

27 **NOES:**

28 **ABSTAIN:**

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ABSENT:

Carol Johnson, AICP
Secretary to the Planning Commission

Attachments:

- 1 – Amendment (Exhibit A to the May 7, 2014, Planning Commission Staff Report).

Exhibit A Development Code Amendment List of Revisions

May 7, 2014

- 1) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 2 Residential Districts (RR, RS, RL, RM, and RH)), Table 122-78.1 (Residential Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Residential Uses; Office, Commercial, and Retail Services; and Open Space and Agricultural Uses; Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-78.1 Residential Districts Allowed Uses and Permit Requirements						ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- - Use Not Allowed
Land Use Classifications	Permit Required by District					Additional Requirements
	RR	RS	RL	RM	RH	
Office, Commercial, and Retail Services						
Eating and Drinking Establishments						
Food Vendor Group Site	--	--	--	--	--	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	--	--	--	--	--	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large	--	--	--	--	--	§122-617 Alcoholic Beverage Sales
Tasting Room	--	--	--	--	--	§122-617 Alcoholic Beverage Sales

- 2) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 3 North Todos Santos District (NTS), Table 122-1031.1 (North Todos Santos District - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-131.1 North Todos Santos District Allowed Uses and Permit Requirements		ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- Use Not Allowed
Land Use Classifications	Permit Required by District	Additional Requirements
	NTS	
Office, Commercial, and Retail Services		
Eating and Drinking Establishments		
Food Vendor Group Site	--	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	--	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large	--	§122-617 Alcoholic Beverage Sales
Tasting Room	--	§122-617 Alcoholic Beverage Sales

- 3) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 4 Office and Commercial Districts (CO, CMX, NC, SC, RC), Table 122-131.1 (Office and Commercial Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-131.1 Office and Commercial Districts Allowed Uses and Permit Requirements						ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- Use Not Allowed
Land Use Classifications	Permit Required by District					Additional Requirements
	CO	CMX	NC	SC	RC	
Office, Commercial, and Retail Services						
Eating and Drinking Establishments						
Food Vendor Group Site	--	MP	MP	MP	MP	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	--	--	--	MP	MP	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large⁽¹¹⁾	--	--	--	UP	UP	§122-617 Alcoholic Beverage Sales
Tasting Room	--	--	--	AP	AP	§122-617 Alcoholic Beverage Sales
Personal Services						
General	-- ZC	ZC	ZC ⁽³⁾	ZC ⁽³⁾	ZC ⁽³⁾	

- (1) Not allowed on ground floor.
 (3) Allowed to occupy up to 20 % gross area of shopping center or multi-tenant building or 20% street frontage of one building.
 (5) No outdoor facilities, storage, or activities are allowed.
 (9) Requires a minimum lot size of 10,000 sq. ft.
 (10) Allowed with residential use only.
 (11) [A facility which exceeds 3,000 square feet.](#)

- 4) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 5 (Downtown Districts (DP, DMX, WMX), Table 122-154.1 (Office and Commercial Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-154.1 Downtown Districts Allowed Uses and Permit Requirements				ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- - Use Not Allowed
Land Use Classifications	Permit Required by District			Additional Requirements
	DP	DMX	WMX	
Office, Commercial, and Retail Services				
Eating and Drinking Establishments				
Food Vendor Group Site	-	MP	MP	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	MP	MP	MP	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large^(1,4)	UP	UP	UP	§122-617 Alcoholic Beverage Sales
Tasting Room	AP	AP	AP	§122-617 Alcoholic Beverage Sales
Media Production Facility	ZC ⁽⁷⁾	ZC	ZC	

- (1) Not allowed on ground floor.
 (2) Allowed on upper floors subject to Use Permit Approval.
 (3) Allowed to occupy up to 20 % gross area of shopping center or multi-tenant building or 20% street frontage of one building.
 (7) Allowed on ground floor subject to Minor Use Permit approval.
 (8) Allowed on upper floors subject to an Administrative Permit approval.

(10) Allowed with residential use only.
(14) A facility which exceeds 3,000 square feet.

5) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 6 Business Park and Industrial Districts (OBP, IBP, IMX, HI), Table 122-177.1 (Business Park and Industrial Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-177.1 Business Park and Industrial Districts Allowed Uses and Permit Requirements					ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- - Use Not Allowed
Land Use Classifications	Permit Required by District				Additional Requirements
	OBP	IBP	IMX	HI	
Office, Commercial, and Retail Services					
Eating and Drinking Establishments					
Food Vendor Group Site	AP	AP	AP	--	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	MP	MP	MP	--	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large ⁽¹¹⁾	UP	UP	UP	--	§122-617 Alcoholic Beverage Sales
Tasting Room	AP	AP	AP	--	§122-617 Alcoholic Beverage Sales

- (3) Allowed to occupy up to 20% of: gross area of shopping center, multi-tenant building or 20% street frontage of one building.
- (4) Outdoor sales, activities, or storage allowed inside or rear yards when enclosed by an eight-foot tall masonry wall and materials do not exceed wall height.
- (5) No outdoor facilities, storage, or activities are allowed.
- (6) Allowed if occupying less than 80,000 square feet of gross floor area.
- (10) Allowed with residential use only
- (11) A facility which exceeds 3,000 square feet.

6) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 7 Public/Quasi-Public Districts (PQP), Table 122-280.1 (Public/Quasi-Public Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-200.1 Public/Quasi-Public Districts Allowed Uses and Permit Requirements		ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- - Use Not Allowed
Land Use Classifications	Permit Required by District	Additional Requirements
	PQP	
Office, Commercial, and Retail Services		
Eating and Drinking Establishments		
Food Vendor Group Site	AP	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	--	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large	--	§122-617 Alcoholic Beverage Sales
Tasting Room	--	§122-617 Alcoholic Beverage Sales

- 7) *Development Code, Article II (Zoning Districts - Uses and Standards), Division 8 Community Land Districts (OS, PR, RLC, AND WRC), Table 122-280.1 (Community Land Districts - Allowed Uses and Permit Requirements), Land Use Classifications; Office, Commercial, and Retail Services, Permit Required by District, is amended as follows; all other Allowed Uses and Permit Requirements in the Table remain unchanged:*

Table 122-223.1 Community Land Districts Allowed Uses and Permit Requirements					ZC - Permitted Use, Zoning Clearance AP - Administrative Permit required MP - Minor Use Permit required UP - Use Permit required -- - Use Not Allowed
Land Use Classifications	Permit Required by District				Additional Requirements
	OS	PR	RLC	WRC	
Office, Commercial, and Retail Services					
Eating and Drinking Establishments					
Food Vendor Group Site	--	AP	--	--	§122-634 Food Vendor Group Site
Micro-Brewery/Distillery	--	--	--	--	§122-617 Alcoholic Beverage Sales
Micro-Brewery/Distillery, Large	--	--	--	--	§122-617 Alcoholic Beverage Sales
Tasting Room	--	--	--	--	§122-617 Alcoholic Beverage Sales

- 8) *Development Code, Article IV. Development Standards, Division 3. Parking, Loading, and Access, Section 122-930(d)(5)a. Access to Landlocked Parcels is amended as follows:*

- (5) **Access to Landlocked Parcels.** Access to landlocked parcels without direct frontage on a public or private street may be created for up to four lots or parcels if the developer or property owner records an access easement that meets the following conditions:
- a. Access to one lot, servicing no more than two dwelling units, shall be at least 16 feet wide, (with including a ~~14-foot-wide~~ travel surface of a width to be determined by the Fire District), connecting the landlocked parcel to a public or private street through an intervening lot or parcel. The easement shall provide emergency access with no parking;

- 9) *Development Code, Article V. Standards for Specific Uses, Division 1. Standards for Specific Uses, add new Section 122-622 "Food Vendor Group Sites", as follows:*

122-622 Food Vendor Group Sites

Where allowed by Article II (Zoning Districts – Uses and Standards), Food Vendor Group Sites shall comply with the requirements of this section.

- (a) **Purpose.** This Section provides standards for Food Vendor Group Sites, established on private or public property, where allowed by Article II (Zoning Districts - Uses and Standards). Food vendors can bring vitality, pedestrian activity, and spillover economic activity to the surrounding areas while protecting the health, safety, convenience, prosperity, and general welfare of the city and surrounding businesses. It is the intent of these regulations to assure a minimum level of cleanliness, quality, and security.

(b) **Applicability**

- (1) This section shall only apply to Food Vendor Group Sites, which are sites with the stationary operation of one or more mobile food vendors clustered together on a single private or public property site during a specified time and in accordance with an

approved permit. All other vendor sites and sales shall comply with the provisions in Concord Municipal Code (CMC) Vendor Ordinance Sections 12.50.010 through 12.50.040.

- (2) Notwithstanding the provisions in this section, all vendors shall also comply with the requirements in CMC Sections 12.50.010 through 12.50.040.

(3)

(c) **Definition**

- (1) **Food Vending.** The sale of prepared foods from a food vendor unit. Food vending activities may include, but are not limited to, the following:

- a. The sale of food prepared off-site in a commercial kitchen and/or prepared on-site within the food vendor unit kitchen, per Contra Costa County Health Regulations.
- b. Food ordered and served from the food vendor unit.
- c. Take-out counter and space for customer queuing.
- d. Prepared food served in disposable wrappers, plates, or containers and sold for on-site or off-site consumption.

- (2) **Food Vendor Unit.** A mobile truck, trailer, vendor cart, or other movable wheeled equipment or vehicle from which food vending occurs.

- (3) **Food Vendor.** A person who is engaged in food vending.

- (4) **Food Vendor Group Site.** A site approved for a specified number of food vendors, where allowed by Article II (Zoning Districts Uses and Standards), for a specific duration and frequency and subject to specific conditions of approval.

- (5) **Food Vendor Group Site Operator.** The individual directly responsible for organizing and/or conducting the Food Vendor Group Site and/or the facility manager, or respective designee, for the purpose of determining liability for damage to City or public facilities as a result of a food vendor group site.

(d) **General Requirements**

- (1) **Location.** Food Vendor Group Sites shall be located a minimum distance of 100 feet from the following (as measured in a straight line from the property line of the Food Vendor Group Site to the nearest property line of the following):

- a. **Schools.** Any public school, unless specifically authorized by the School District, indicating that the school has no objections to the proposed Food Vendor Group Site locating on school grounds or within 100 feet of the school grounds.
- b. **Parks.** Any public park or recreation area unless specifically authorized by the City.
- c. **Restaurants.** Any Full Service, Limited Service, or Drive through, restaurant, unless specifically authorized by the restaurant.
- d. Any Bar, Nightclub, Lounge.

- (2) **Restrooms.** Food Vendor Group Sites shall be located within 200 feet of an available functioning restroom facility, which is available for the vendors and their employees.

and customers, unless otherwise set forth in the permit approval for the Food Vendor Group Site.

- (3) **Hours of Operation.** Food Vendor Group Site activities shall not be conducted before 7:00 a.m. or after 9:00 p.m., any day of the week, and all vendor units shall be cleared from the site by 10:00 p.m., unless otherwise set forth in the permit approval for the Food Vendor Group Site.
- (4) **Site Circulation**
 - a. Food vendor units shall not impede circulation, block driveways, drive aisles, parking, or other site improvements which are required for other businesses
 - b. Food Vendor Group Sites shall not locate or block parking spaces which serve as required parking for any other business or use on the property;
 - c. Each food vendor unit at a Food Vendor Group Site shall be sited in a manner to insure that the customer queue maintains a minimum five feet of unobstructed clear path along any public sidewalk or right-of-way when the service window faces the street or sidewalk.
 - d. Safe and adequate parking shall be provided for customers of the Food Vendor Group Site, the number of spaces and the layout shall be submitted with the application for a Food Vendor Group Site.
- (5) **Site Conditions.** The Food Vendor Group Site operator shall be responsible for the improvement, maintenance, and compliance with the conditions of approval, as follows:
 - a. Installation of improvements and maintenance of the site, adjacent right-of-way, and properties within 100 feet of the site in a safe, litter free, and clean manner at all times.
 - b. Installation of paving of all areas of the site to be used by vendor units and as needed for parking, shall be paved.
 - c. Installation and maintenance of adequate lighting to ensure vendor and customer safety. All lighting shall be directed downwards and away from adjacent properties and public streets.
 - d. On-going arrangements and costs for the collection and disposal of waste and trash after each Food Vendor Group Site event.
 - e. The layout of the Food Vendor Group Site shall comply with the approved permit and maintain site circulation and access consistent with the Americans with Disabilities Act (ADA).
 - f. Installation, maintenance, and storage of other site amenities such as tables and chairs, portable restroom facilities, and/or temporary shade structures, as required.
- (6) **Security.** The Food Vendor Group Site operator shall ensure that adequate safety and security measures are implemented.
- (7) **Display and Appearance of Mobile Food Vendor Units**

- a. Each food vendor unit shall display a current business license and current health department permit in plain view, as required by the health department.
 - b. Food vendor units shall be maintained in movable condition at all times.
 - c. Each food vendor shall provide at least one 32 gallon trash receptacle within 15 feet of their food vendor unit.
- (8) **Alcohol.** The serving or consumption of alcohol is prohibited at Food Vendor Group Sites.
- (e) **Permit requirements.** Where allowed by Article II (Zoning Districts – Uses and Standards), an Administrative Permit or Minor Use Permit shall be required, in accordance with Article VII. (Permits and Permit Requirements).
- (f) **Conditions of Approval.** In addition to the requirements in this section, additional conditions may be required as determined necessary to protect the public health, safety, welfare, and order, and to minimize adverse impacts upon the surrounding neighborhood and the general community. Additional conditions may be added to address noise, lighting, odors, or smoke. The following conditions shall apply to all Food Vendor Group Sites:
- (1) No more than one Food Vendor Group Site shall be allowed on any single property.
 - (2) Any exterior storage of refuse, equipment, or materials associated with the Food Vendor Group Site and each food vendor unit shall be prohibited on the site except during operating hours.

10) *Development Code, Article IX General Terms, Division 1. Use Classifications, Section 122-1580 Use Classifications, is amended as follows:*

Eating and Drinking Establishments

Bar, Night Club, Lounge. An establishment that sells beer, wine, and distilled spirits in accordance with applicable California Department of Alcoholic Beverage Control regulations, ~~on-site consumption~~ and may include live entertainment.

Micro-Brewery/Micro-Distillery. A facility for the production and packaging of alcoholic beverages for distribution, retail, or wholesale, on or off premises and which meets all applicable California Department of Alcoholic Beverage Control regulations. Outdoor eating areas shall be permitted as an accessory use to a micro-brewery/micro-distillery consistent with Section 122-632. Sidewalk Cafes and Outdoor Eating Areas.

Restaurant, Full Service. A restaurant that prepares food, may include alcoholic drinks, and serves seated customers who select food from a menu. Take out service is optional and may not be available.

Restaurant, Limited Service. An establishment that prepares food or sells packaged food for on-site consumption, take out, or delivery. Typically customers self-serve or are served partially. This classification includes cafeterias, delicatessens, fast-food restaurants, sandwich shop, pizza parlors, snack bars, takeout restaurants, and catering businesses or bakeries that have a storefront restaurant component.

Restaurant with Drive-Through. A restaurant where food or coffee type beverages may be purchased by motorists who remain in their vehicles during the sales transaction.

Restaurant with Live Entertainment. A full service or limited service restaurant that also provides live music, a disc jockey, karaoke, dancing to live or recorded music, and/or comedy or theatrical performances to patrons. This classification does not include coin-operated music player machines, i.e., jukeboxes, or other recorded music.

Tasting Room. A facility allowing on-site tasting of alcoholic beverages and retail sales directly to the public and possessing the appropriate California Department of Alcoholic Beverage Control license type. The tasting room may be operated within a micro-brewery/micro-distillery facility, accessory to a separate on-site use, or as a stand-alone retail use. Outdoor eating areas shall be permitted as an accessory use to a tasting room consistent with Section 122-632, Sidewalk Cafes and Outdoor Eating Areas.

11) *Concord Municipal Code Section 12.50.030 is amended as follows:*

Chapter 12.50 Vendors

Sec. 12.50.030. Vending locations; permits and business licenses; vendor operations.

(a) Authority to vend on public or private property. A vendor may be permitted to operate only at public and private property authorized by this section, subject to first obtaining a written city permit. This section does not apply to a vendor on public property not owned by the city if permission to vend has been granted by the property owner or on private property where permission to vend has been granted by city permit.

(1) Vendor motor vehicles. On private property, which is not an approved Food Vendor Group Site, vendor motor vehicles are allowed only at construction sites. Such vehicles may stop at a construction site for no more than 30 minutes without moving to a new location at least 300 feet removed therefrom. Such vehicles may not return to a location where they have previously stopped to vend within the previous three hours.

(2) Nonmotorized carts. Vendor carts are allowed on private property only pursuant to a city ~~use~~ administrative permit or ~~Zoning Administrator's~~ minor use permit. Vendor carts are allowed on construction sites only pursuant to an administrative ~~occupancy~~ permit. The approving authority may impose reasonable conditions as provided in subsection (g)(2). At construction sites on private property, vendor carts may stop for no more than 30 minutes without moving to a new location at least 300 feet removed therefrom. Such carts may not return to a location where they have been previously stopped to vend within the previous three hours.

(3) Vendors prohibited in Downtown ~~Business~~ Pedestrian Zoning District. Vendors shall not be permitted to operate at any publicly owned location in the Downtown ~~Business~~ Pedestrian Zoning District except as authorized by section 90-103(b)(2) pursuant to a valid minor use permit.



REPORT TO PLANNING COMMISSION

DATE: May 7, 2014

SUBJECT: DOWNTOWN CONCORD SPECIFIC PLAN ADOPTION

Recommendation: Adopt Resolution No. 14-14 PC, recommending City Council approval of the Addendum to the Final Supplemental Environmental Impact Report (SEIR) to the 2030 Concord General Plan EIR for the Concord Development Code Project, and adoption of the Downtown Concord Specific Plan General Plan Amendment (PL14160-GP) as Volume IV to the Concord 2030 General Plan.

I. Introduction

The Planning Commission is being asked to review, discuss, and consider adopting Resolution No. 14-14PC (Exhibit A) recommending City Council: a) approval of the Addendum to the Final Supplemental Environmental Impact Report (SEIR) to the 2030 Concord General Plan EIR for the Concord Development Code Project; and (b) adoption of the Downtown Concord Specific Plan General Plan Amendment (PL14160-GP) as Volume IV to the General Plan. Upon approval of the Addendum and adoption of the Specific Plan, the Specific Plan will be added to and become part of the General Plan as new Volume IV thereof.

II. Background

In January 2013, the development of a Downtown Concord Specific Plan (Downtown Plan) was initiated for the Downtown Concord Priority Development Area (PDA), funded primarily through a grant from the Metropolitan Transportation Commission (MTC). A specific plan is a document that includes policies, measures, and strategies to develop a defined geographic area. The Downtown Plan will serve as an economic development tool with the advantage of combining the land use plan, specific zoning, context specific regulations to address unique conditions as well as infrastructure strategies and funding programs into one comprehensive package.

There are many benefits associated with the PDA Program and the development of a specific plan for the City's Downtown PDA. It can serve to leverage grant funding ensuring Concord's eligibility for future state and regional grant funding and enable the City to comply with other State mandates. Areas designated as PDAs are eligible for additional technical assistance and funding for certain types of planning studies and capital projects from regional and state sources.

Senate Bill (SB) 375 requires the Bay Area and other California metro areas to develop integrated regional land-use and transportation plans to meet state targets for reducing greenhouse gas emissions from cars and light trucks. It also requires emissions reductions through coordinated regional planning that integrates transportation, housing, and land use policy, and achieving the goals of these laws will require significant increases in travel by public transit, bicycling, and walking.

In the Bay Area, a regional Sustainable Communities Strategy (SCS) was developed in conjunction with the Association of Bay Area Governments (ABAG), which is responsible for land use and housing assumptions

and synchronizes the Regional Housing Needs Allocation (RHNA) process to be consistent with the development pattern in the SCS. The SCS is the mechanism intended for achieving the required reductions in emissions by promoting compact, mixed-use commercial and residential development that is walkable, bikeable and in close proximity to mass transit, jobs, schools, shopping, and other amenities. Other positive outcomes of the SCS include more transportation choices for residents, the creation of more livable communities, and a reduction in the pollutants associated with climate change.

The City has made steady progress toward supporting in these efforts over the last year through the adoption of a Citywide Climate Action Plan in July 2013, approval of a Complete Streets Amendment to the 2030 General Plan on December 10, 2013, and embarking on the Downtown Plan process. The Downtown Concord BART Station Priority Development Area (PDA) was designated initially as a Growth Opportunity Area in December 2010, as part of ABAG's SCS and development of their Initial Vision Scenario (2010-2035). In March 2012, this area was formalized as a PDA making the area eligible to compete for future regional funding. In April 2012, the City applied for a PDA grant to prepare a Downtown Plan for the Downtown Concord BART Station PDA, and subsequently was awarded the grant which allowed the City to retain a consultant to conduct the community engagement process and prepare the Downtown Plan.

III. General Information

A. General Plan

The Downtown Plan boundary encompasses approximately 600 acres with a variety of General Plan land use designations including Downtown Pedestrian, Downtown Mixed Use, Residential High, Residential Medium, Low Density Single Family Residential, Community Office, Regional Commercial, Service Commercial, Commercial Mixed Use, North Todos Santos, Public Quasi-Public, Parks and Recreation, and Open Space.

B. Zoning

The Downtown Plan boundary includes a variety of zoning districts, consistent with the General Plan designations. These zoning districts are represented on a map referred to in Figure 3.1.9 of the Downtown Plan.

C. CEQA¹

The CEQA Guidelines Section 15164 state that the Lead Agency or responsible agency shall prepare an Addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in CEQA Guidelines Section 15162 calling for preparation of a subsequent EIR have occurred. One important aspect of the project is that the Downtown Plan does not propose any changes to the General Plan text land use maps or Development Code text or zoning maps as a part of the plan. This consistency with the existing General Plan and Development Code was the primary basis for the project team's determination that the environmental documentation most appropriate for the project was an Addendum to the Final Supplemental Environmental Impact Report (SEIR) to the 2030 Concord General Plan EIR for the Concord Development Code Project. An Addendum was prepared and is attached as Attachment

¹ California Environmental Quality Act of 1970, Public Resources Code § 21000, et seq., as amended and implementing State CEQA Guidelines, Title 14, Chapter 3 of the California Code of Regulations (collectively, "CEQA").

1 to Resolution No. 14-14PC (Exhibit A to this Staff Report), and is hereby incorporated by reference. The Addendum discusses the applicable CEQA framework, requirements, and basis for the City's determination in more detail.

The Addendum updates the *Final SEIR to the 2030 Concord General Plan EIR for the Concord Development Code Project*, certified on July 10, 2012. The Addendum addresses recent changes to local, state, and federal regulations, changes to environmental data (i.e., federal and state air quality standards, state greenhouse gas inventory data, and county water supply data), and implementation of the Downtown Plan (the Downtown Plan will comply with all applicable mitigation measures of the SEIR). The Addendum further finds that, notwithstanding the changes in circumstances, the Downtown Plan would not result in new significant or substantially more severe environmental impacts than those identified in the SEIR, no changes to or new mitigation measures are required, and concludes that the analysis and the conclusions of the SEIR remain current and valid. As such, the Addendum does not require major revisions to the SEIR and impacts in this Addendum are consistent with those in the SEIR. None of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred; therefore, this Addendum to the certified SEIR is consistent with CEQA Guidelines.

The CEQA Guidelines also state that an Addendum need not be circulated for public review, but can be included in or attached to the final EIR prior to making a decision on the project; nor are responses to comments required. However, as a courtesy given interest in the project, and in the interest of transparency, the Addendum was made available to the public for the period starting January 27, 2014 through to February 24, 2014; comments received are discussed below.

IV. Discussion

The Downtown Plan process has included the following components: 1) Development of a Downtown Vision; 2) A community engagement process to further the preparation of the Downtown Plan; 3) Preparation of goals, policies and implementation strategies to promote enhanced pedestrian and bicycle access to and from the BART Station, attractive high-density infill, incentives for affordable housing, and improved transit opportunities; and 4) Development of strategies to spur new development.

Downtown Vision

The Downtown Steering Committee developed the following Downtown Vision through a series of meetings:

The Downtown is distinguished by its authenticity and historic assets, preserved and strengthened by the strategic infill of new high quality development that links the past with a vibrant future. The origins of Concord, beginning in 1834 as Rancho Monte del Diablo, are evident throughout Downtown. The central plaza, which retains the City's original name of Todos Santos, is a rare example of the 16th Century Law of the Indies which once dictated the planning and design of Spanish colonial cities. New buildings demonstrate their respect for the City's heritage through modern interpretations of early California architecture. Thoughtfully blending the old with the new, Downtown Concord is constantly evolving and growing in an organic and sustainable manner.

Downtown Concord is dynamic, safe and attractive to families, businesses, and visitors. It supports a thriving local economy by providing a variety of living, employment, and entertainment opportunities for multiple generations. A mix of boutique shops, restaurants, cafes, and cultural destinations are integrated by a lush green network of pedestrian-friendly streets which ensure activity both day and night. Grant Street, anchored by Todos

Santos Plaza, connects the Downtown to the rest of the Bay Area via the BART Station. It is just one example of the many distinctive streets that have been designed to integrate walking, biking, transit use, green infrastructure, and active storefronts. The synergy created by the diverse mix of ages, incomes, and housing types promotes healthy, active lifestyles and a prosperous community.

Community Outreach

A community engagement process to obtain feedback on the future of Downtown has been at the forefront of discussions since the PDA grant was submitted. Staff has focused on implementing an Outreach Plan that obtains input from a variety of community members including residents, businesses, local and regional stakeholders and transportation partners. A Technical Advisory Committee was assembled including representatives from BART, MTC, Contra Costa Water District, Central Contra Costa Sanitary District, County Health Department and County Connection. In addition, staff expanded the involvement of the Downtown Steering Committee (DSC) from the four meetings initially planned to 11 meetings over the course of the project. The Downtown Steering Committee consists of a 13 member ad-hoc committee appointed by the City Council to guide the Downtown Plan process and includes two members of the City Council, two members of the Planning Commission, two members of the Design Review Board, a representative from the Concord Chamber of Commerce and the Todos Santos Business Association and five at-large members. To date, the following outreach meetings have been held:

Community Workshops

- Downtown Ideas Fair - To obtain input from residents & stakeholders in the downtown (Sept. 22, 2012)
- 3 Community Workshops (May 6th, October 7th, and Jan. 27th 2014)

Technical Advisory Committee Meetings

- 4 Technical Advisory Committee meetings (March 13th, April 3rd, June 3rd, Sept. 9th)

Downtown Steering Committee Meetings

- 11 Downtown Steering Committee meetings (March 13th, April 18th, June 3rd, July 1st, July 22nd, Aug. 5th, Sept. 9th, Oct. 15th in 2013 and Jan. 13th, March 31st, and April 28th, in 2014)

Stakeholder Meetings

- Stakeholder meetings and individual outreach meetings (Feb. 27th – affordable housing interests, July 5th - developer panel, August 27th – Doris Court neighborhood, Nov. 20th, 2013 and Jan. 28th, 2014 - roundtable meetings on housing development); as well as a variety of one on one meetings with developers.

Planning Commission and City Council Updates

- 3 Planning Commission Updates on June 19 and October 16, 2013 and January 15, 2014
- 2 City Council Updates on September 24, 2013 and February 4, 2014

These meetings were focused on providing background information; developing the existing conditions report; conducting public outreach; and obtaining feedback from the community, the technical advisory committee and the DSC in order to formulate three preliminary alternatives for study, select an alternative for analysis and further develop the alternative toward meeting the project goals.

In addition, to maintain widespread outreach and transparency, all of the documents associated with the project were maintained on and can be found on the webpage for the Downtown Plan project at www.cityofconcord.org/downtownplan including agendas, meeting minutes and presentation materials for meetings and workshops held throughout the 16-month process.

Relevant Goals

The overarching goals envision the PDA as a bustling, transit-oriented, urban space serving as both a magnet of activity for the City and a regional commuter hub for the County. The relevant goals for the Downtown Plan discussed within the City's grant application for the PDA Planning Program include:

- Increasing BART ridership and efficiency of multi-modal connections;
- Intensification of uses and densities from current built levels;
- Promoting mid and high-density housing;
- Constructing housing projects for a mix of housing types and income levels;
- Increasing job creation;
- Enhancing a strong business climate and expanding the City's economic base; and
- Implementing strategies to foster a vibrant downtown prior to initiation of construction within the Concord Reuse Plan Area.

Primary Components of Plan based on Community Feedback

Based on the DSC meetings and Community Workshops that have been held, there are a number of priorities that have been discussed for inclusion in the Downtown Plan (Attachment 2 to Exhibit A). It is important to note that the Downtown Plan does not propose any rezoning, but rather focuses on implementation strategies to encourage the full potential of growth possible within the PDA by:

- Providing a stronger connection along Grant Street between Todos Santos Plaza and BART.
- Providing a greenway (consisting of streetscape/landscape improvements within the current right-of-way) to improve access and walkability while facilitating access to the major destinations within the downtown. This includes a greenway under the BART tracks to connect existing trails/walkways.
- Providing traffic smoothing/management at key locations within the downtown.
- Placing a greater emphasis on biking, walking and the use of mass transit to optimize circulation and reduce congestion.
- Offering a looping shuttle to easily transport residents and commuters from BART to Todos Santos Plaza and major office and retail uses creating a range of implementation strategies to facilitate growth, economic development and a move toward complete streets at key locations within the downtown.
- Highlighting historic connections and providing an emphasis on Early California architecture.
- Developing performance measures for tracking and monitoring to assure implementation of the Plan over time, and checks and balances to provide steady and balanced development into the 2035-2040 horizon.

A summary of the development planned for the downtown over the next 20 to 25 years is summarized below in two phases, with information regarding the existing development within the PDA for comparison. This

level of development is consistent with the land use designations provided for within the General Plan and more recently by the Development Code adopted in July 2012.

Summary of Development for the Downtown Plan

	Housing Units	Residents	Office	Retail	Jobs
Existing¹	4,429 ³	10,700	2,840,000	1,500,000	13,800
Phase I	3,465	8,680	586,400	281,200	2,900
Phase II	555	1,420	981,500	462,000	4,820
Phase I+II²	4,020	10,100	1,567,900	743,200	7,720
Total Projection	8,449	20,800	4,407,900	2,243,200	16,998

1. All numbers are approximate

2. Housing Units assumes average 1,000 sq. ft. unit

3. Includes 179 units of approved Renaissance Phase II apartments.

The Downtown Plan, once adopted, will be used to inform the Housing Element Update 2014-22, currently under preparation.

Public Comments on the Downtown Plan

The Downtown Plan was made available for public review during the period January 27, 2014 through to February 24, 2014. Three comment letters or e-mails were received commenting on the Plan:

- 1) Transform – Memo received on January 28, 2014 regarding parking and circulation (Exhibit B)
- 2) Frank J. Dodd; E-mail received on February 27, 2014 regarding secondary living units (Exhibit C)
- 3) Community Coalition for a Sustainable Concord, Greenbelt Alliance, East Bay Housing Organizations, Monument Community Partnership/Michael Chavez Center and Bike East Bay; Joint letter received on March 25, 2014 (Exhibit D)

Transform Summary Comments

- Modify Table 5.2 to show current parking requirements for Affordable Housing and TOD
- Encourage further flexible parking standards
- Require car sharing parking spaces at new developments
- Require free memberships for car sharing in new developments
- Promote goal of ensuring 15% availability of street parking on any given block
- Decouple bicycle parking from vehicle parking

- Staff response – Project team has incorporated updates in the Final Plan to incorporate suggested changes and/or study further based on existing implementation strategies with modifications to Table 5.2 of the Downtown Plan and addition of strategies T-3 (G), (H) and (I) with modifications to T-3(C) and (E) and the addition of strategy I-2(I).

Frank J. Dodd Summary Comments

- Allow secondary units up to 1,000 sq. ft.
- Eliminate owner occupancy requirement with deed restriction
- Reduce water meter/connection fee
- Provide flexible parking requirements
- Allow PUD for two units on RS-6 zoned lot

- Staff response – Project team included updates to Implementation Strategy LU-3, as items K and L to:
 - Examine updates to Secondary Living Unit ordinance to provide affordability/flexibility in the Transit Overlay.
 - Coordinate meeting with CCWD to explore reductions to fees and requirements by the District

CCSC, et. al. Summary Comments

- Delay adoption at least one month to allow for ULI Technical Advisory Panel to be completed
 - Provide more specific language to advance solutions for safer walking/biking
 - Enhance parking policies for greater demand management and affordable housing
 - Include affordable housing unit target
 - Dedicate two of four city-owned parcels for affordable housing
 - Achieve 25% affordable homes in Downtown Plan Area
 - Include policies to prevent displacement of low-income residents as Plan implementation progresses.
 - Create a mix of good jobs that pay living wages
 - Enhance policies for green development to create jobs
 - Ensure connections to regional open space
- Staff response – Project team has incorporated updates to accommodate some of the comments and/or study further; as noted below:
 - ULI Comments will be incorporated, as appropriate with modifications for Council’s approval with the Downtown Plan.
 - More specific policies will be outlined in the Bicycle and Pedestrian Master Plan, anticipated to be initiated in July/August 2014.
 - The City Council and Planning Commission each recently raised concerns about reducing parking ratios for residential projects when Concord is still largely suburban in character. Other concerns were voiced regarding parking overflow and neighborhood disputes. The Development Code recently reduced ratios for non-residential parking in the TOD area, however the lack of development since that time means that the effectiveness of these reductions in Downtown Concord has not been demonstrated to date. Therefore, there are concerns with expanding these reduced ratios to residential uses, at this time. However, there are other parking strategies for inclusion within Implementation Strategies T-3 G, H and I have been added as discussed earlier.
 - The existing conditions report regarding affordable housing found that 66% of the existing residential units in the Downtown are affordable to families that fall in the low-income category. As a result, the initial phases of the Downtown Plan will be focused on attracting and constructing market rate housing. Through the City’s monitoring efforts, tracking of affordability within the project area will continue and if and when the affordability levels drop substantially, the issue will be revisited during the mid-term phase of the project (2017-2022). The City will be looking at modifications to the Secondary Living Unit Ordinance to provide more flexibility as one mechanism to potentially create some additional affordable housing.
 - There is currently no City Council support for dedicating two of the four Successor Agency sites for affordable housing projects. In addition, the City has not yet received a formal response from the Department of Finance regarding their review of the City’s Long Range Property Management Plan regarding the two sites, and therefore it is uncertain how and when these properties may be developed.

Urban Land Institute Panel

Downtown Concord was selected as the focus of a 2-day Urban Land Institute (ULI) Technical Advisory Panel (TAP). On April 24th and 25th, the panel visited Concord for an intensive work session examining Downtown Concord, touring the Downtown PDA area, meeting with staff, meeting with stakeholders, and then participating in a concentrated study session/charette. The panel consisted of seasoned professionals with experience in real estate, commercial brokerage, planning, architecture, and developing financing.

The panel members for Concord included: economist Alan Billingsley; Will Fleissig, President with Communitas Development, Inc.; Chris Haegglund, Principal with BAR Architects; Kathleen Livermore, contract planner with City of Alameda; Cameron Mueller, Urban & Environmental Planner with AECOM; Anu Natarajan, City of Fremont Council Member; Paul Ring, Vice President of Development with Core Companies; and Jeff Tumlin, Principal with Nelson Nygaard Transportation Planners. The ULI presentation held in the Council Chambers was open to the public, and approximately 25 people were in attendance. City staff video-taped the session for future viewing by the public.

The ULI TAP presented their recommendations on April 25th (Attachment 3 to Exhibit A). The recommendation as noted during the ULI presentation were those strategies requiring immediate implementation. Staff found the presentation very helpful, in that it provided external confirmation of the need for immediate action on a number of the Downtown Plan's implementation strategies. Staff reviewed the ULI recommendations and determined that almost all of them are findings are currently incorporated within the Downtown Plan (Chapter 7). Attachment 3 (to Exhibit A) lists each of the ULI recommendations in Column 2 and the Downtown implementation strategies that relate to each of the recommendations in Column 1.

During the DSC's April 28th meeting, the Committee members expressed excitement and satisfaction that much of the ULI discussion was in agreement with the recent discussions of the DSC. The DSC also noted they were satisfied with the strategies the ULI recommended for "Immediate Implementation". As a result, staff has modified Chapter 7 to highlight the associated Implementation Strategies and note these for priority status. In addition, staff has incorporated one additional implementation strategy for inclusion in the Downtown Plan T-1 G "Re-examine signal timing on through streets, especially during mid-day."

Environmental Review Process

The City has prepared the Downtown Plan to provide broad policy concepts, guidelines, and standards for public and private enhancements to the Downtown Concord PDA. To meet the requirements of CEQA, an Addendum was prepared. Conditions within the Downtown Concord Priority Development Area (PDA) have not changed substantially since the SEIR was adopted and the Downtown Plan proposes development essentially identical to that envisioned in the General Plan and SEIR. The Addendum did not include major revisions to the SEIR and all impacts identified are consistent with those in the SEIR. The Transportation Assessment (Appendix A to the Addendum) prepared by Fehr and Peers in January 2014 confirmed that implementation of the Downtown Plan would not result in traffic impacts not previously identified in the SEIR. The Addendum concludes that no new or substantially more severe significant effects would occur and no additional mitigation measures are required. Consequently, all mitigation measures would continue to be adequate and implementation of these measures would continue as prescribed in the SEIR.

CEQA does not require that an Addendum be circulated to the public or agencies. However, as a courtesy given interest in the project, and in the interest of transparency, an Addendum was prepared and made available to the public at the Open House held on January 27, 2014, and the public was informed that comments would be accepted until February 24, 2014. The document was made available to the public at the Permit Center lobby counter and on the City's webpage. The City received two (2) comment letters/e-mails on the Addendum, received on February 24, 2014; a letter from the Greenbelt Alliance (Exhibit E) and an email from Adam Foster (Exhibit F).

Greenbelt Alliance Letter

The Greenbelt Alliance letter included several requests that additional sections and mitigation measures be included in the Addendum. These recommendations primarily related to including feasible mitigation strategies from the City's new Climate Action Plan (CAP), providing mitigation strategies that coincide with updates to the City's Housing Element, currently underway, as a way to increase the number of homes for low income residents, and additional measures to reduce Greenhouse Gas emissions and Vehicle Miles Traveled.

The Addendum is a program-level document and includes all of the mitigation measure identified in the SEIR. The Addendum thoroughly analyzed the potential environmental effects of the Downtown Plan and found that, notwithstanding the changes in circumstances under which the SEIR was prepared; the Downtown Plan would not result in new significant or substantially more severe environmental impacts than those identified in the SEIR. As actual development projects come forward and the City receives sufficient reliable data to permit preparation of a meaningful and accurate report on their impact, the City will undertake additional project-level review; that project level review may call for the City to impose conditions of approval or require mitigation measures to address project-specific concerns. The recommendations in the Greenbelt Alliance letter do not address specific analysis completed for the preparation of the Addendum, nor do they refute the conclusions of the Addendum. The letter does not contain a specific comment regarding the SEIR's or Addendum's analysis of environmental impacts. For these reasons, the Addendum meets the requirements of CEQA and the City of Concord.

Adam Foster Email

The email from Adam Foster states that because the Downtown Plan does not eliminate existing high volume roadways within the Downtown area, noise and safety hazards will continue to occur. CEQA requires an environmental document to evaluate the impacts of proposed development. The conditions described in the letter are existing conditions and were taken into account during the preparation of the Downtown Plan and the SEIR.

Once specific development projects are proposed, existing and future roadway volumes will be determined and measures, as necessary, will be considered by the City to reduce vehicular speeds and improve conditions. All mitigation measures for noise impacts identified in the SEIR will be implemented and additional measures may be identified at the time future development projects are proposed, consistent with City policies, including the General Plan. The letter does not contain a specific comment regarding the SEIR's or Addendum's analysis of environmental impacts. For these reasons, the Addendum meets the requirements of CEQA and the City of Concord.

V. Fiscal Impact

The adoption of the Downtown Plan will have a beneficial fiscal impact on the City. The adoption of the Plan will also enable the City to be eligible for future awards from State and regional agencies and will streamline future development by providing specific policies, strategies and an implementation and financing plan.

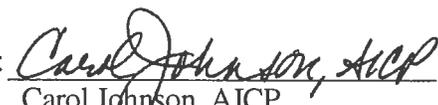
VI. Public Contact

Notification was published in the Contra Costa Times, as required by the Concord Municipal Code. Notice for this item has also been posted at the Civic Center, at least 7 days prior to the public hearing.

VII. Summary and Recommendations

Adopt Resolution No. 14-14 PC (Exhibit A) recommending City Council approval of the Addendum to the Final Supplemental Environmental Impact Report (SEIR) to the 2030 Concord General Plan EIR for the Concord Development Code Project, and adoption of the Downtown Concord Specific Plan General Plan Amendment (PL14160-GP) as Volume IV to the Concord 2030 General Plan.

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EXHIBITS

- Exhibit A: Resolution 14-14PC (Attachment 1: Addendum, Attachment 2: Downtown Concord Specific Plan, Attachment 3: ULI Recommendations)
- Exhibit B: Memo from Transform, dated January 28, 2014
- Exhibit C: E-mail from Frank J. Dodd, dated February 27, 2014
- Exhibit D: Joint letter from Community Coalition for a Sustainable Concord, Greenbelt Alliance, East Bay Housing Organizations, Monument Community Partnership/Michael Chavez Center and Bike East Bay, dated March 25, 2014 (w/appendices A, B, and C)
- Exhibit E: Greenbelt Alliance Letter, dated February 24, 2014
- Exhibit F: Adam Foster e-mail, dated February 24, 2014

1 **BEFORE THE PLANNING COMMISSION**
2 **OF THE CITY OF CONCORD,**
 COUNTY OF CONTRA COSTA, STATE OF CALIFORNIA

3 **A RESOLUTION RECOMMENDING CITY**
4 **COUNCIL APPROVAL OF THE ADDENDUM TO**
5 **THE FINAL SUPPLEMENTAL**
6 **ENVIRONMENTAL IMPACT REPORT (SEIR) TO**
7 **THE 2030 CONCORD GENERAL PLAN EIR FOR**
8 **THE CONCORD DEVELOPMENT CODE**
9 **PROJECT, AND ADOPTION OF THE**
10 **DOWNTOWN CONCORD SPECIFIC PLAN**
11 **GENERAL PLAN AMENDMENT (PL14160-GP)**
12 **AS VOLUME IV OF THE CONCORD 2030**
13 **GENERAL PLAN**

Resolution No. 14-14PC

14 **WHEREAS**, the City of Concord adopted the Concord 2030 General Plan on October 2, 2007
15 (“General Plan”); and

16 **WHEREAS**, the City of Concord concurrently certified the Final Environmental Impact
17 Report for the Concord 2030 General Plan on October 2, 2007 (“General Plan EIR”); and

18 **WHEREAS**, the City of Concord adopted Chapter 122 of the Concord Municipal Code
19 (“Development Code”) on July 24, 2012; and

20 **WHEREAS**, the City of Concord concurrently certified the Supplemental Environmental
21 Impact Report to the 2030 Concord General Plan EIR for the Concord Development Code Project on
22 July 24, 2012 (“SEIR”); and

23 **WHEREAS**, Plan Bay Area represents the nine-county region’s long-range plan to meet the
24 requirements of the State of California’s *SB 375 Linking Regional Transportation Plans to State*
25 *Greenhouse Gas Reduction Goals*, and calls on each of the State’s 18 metropolitan areas to develop a
26 Sustainable Communities Strategy (SCS) to accommodate future population growth and reduce
27 greenhouse gas (GHG) emissions from cars and light trucks. Working in collaboration with cities and
28 counties, the Plan advances initiatives to expand housing and transportation choices, create healthier
communities, and build a stronger regional economy. The GHG reduction target for the Bay Area is a
15 percent per capita reduction by 2035; and

WHEREAS, in the Bay Area, a regional SCS was developed in conjunction with the
Association of Bay Area Governments (ABAG), which is responsible for land use and housing

1 assumptions and synchronizes the Regional Housing Needs Allocation process (RHNA) to be
2 consistent with the development pattern in the SCS. The SCS is the mechanism intended for
3 achieving the required reductions in emissions by promoting compact, mixed-use commercial and
4 residential development that is walkable, bikeable and in close proximity to mass transit, jobs,
5 schools, shopping. Other positive outcomes of the SCS include more transportation choices for
6 residents, the creation of more livable communities and a reduction in the pollutants associated with
climate change; and

7 **WHEREAS**, regional agencies including the Metropolitan Transportation Commission (MTC)
8 work to support local governments' commitment to goals focused on compact, transit-oriented
9 development by directing existing and future incentives to Priority Development Area (PDAs),
10 locally-identified as infill development opportunity areas located near transit; and

11 **WHEREAS**, as described in MTC's Transit-Oriented Development Policy, to assist cities in
12 meeting these goals, MTC launched a Station Area Planning grant program in 2005 to fund city-
13 sponsored planning efforts for the areas around future stations. These station-area and land-use plans
14 are intended to address the range of transit-supportive features that are necessary to support high
levels of transit ridership; and

15 **WHEREAS**, the PDA Planning Program funds comprehensive planning in PDAs that will
16 result in intensified land uses around public transit hubs and bus and rail corridors in the nine-county
17 San Francisco Bay Area intended to increase the housing supply and jobs within the planning area,
18 boost transit ridership, promote multi-modal connections, and locate key services and retail within the
planning area; and

19 **WHEREAS**, Government Code section 65358 et seq. provides for the amendment of all or
20 part of an adopted general plan; and

21 **WHEREAS**, Development Section 122-1099 et seq. sets forth City requirements with respect
22 to general plan amendments; and

23 **WHEREAS**, the City has complied with the foregoing as well as other applicable
24 requirements of the Local Planning Law (Government Code section 65100 *et seq.*), and the City's
25 ordinances and resolutions with respect to general plan amendments; and

26 **WHEREAS**, on January 9, 2013, the City initiated application No. PL14160-GP for the
27 Downtown Concord Specific Plan General Plan Amendment to add a new Volume IV of the General
28 Plan with the goals of 1) increasing BART ridership and efficiency of multi-modal connections; 2)

1 jump starting intensification of uses and densities from current built levels; 3) promoting mid and
2 high-density housing; 4) constructing housing projects for a mix of housing types and income levels;
3 4) increasing job creation; and 5) enhancing a strong business climate and expanding the City's
4 economic base; and 6) implementing strategies to foster a vibrant downtown; and

5 **WHEREAS**, the Downtown Concord Specific Plan ("Downtown Plan," attached hereto as
6 Attachment 2 and incorporated by reference) identifies strategies in the categories of Land Use,
7 Economic Vitality, Transportation and Circulation, Infrastructure, Design Guidelines and Funding
8 Programs that will further assist the City in achieving State-recommended GHG emission reductions;
9 the Downtown Plan is intended to be added to and become part of the General Plan as new Volume IV
10 thereof; and

11 **WHEREAS**, the Downtown Plan identifies goals and policies to complement the City's
12 Complete Streets policies (incorporated into General Plan as previous Text Amendment through
13 Resolution No. 13-4823.1 on Dec. 10, 2013) through identifying a street typology overlay,
14 establishing a pedestrian priority zone, developing a bicycle network to be further refined as part of
15 the Bicycle and Pedestrian Master Plan, collaborating with transit providers to enhance efficiency, and
16 other related policies intended to make the most efficient use of urban land and transportation
17 infrastructure, improve public health by encouraging physical activity, reduce vehicle miles traveled
18 and increase the number of short trips attributed to biking, walking, and use of public transit, and
19 reduce GHG emissions; and

20 **WHEREAS**, on June 19, 2013; October 16, 2013; and January 15, 2014; the Planning
21 Commission received staff reports on the Downtown Plan, and considered evidence presented by City
22 staff and other interested parties; and

23 **WHEREAS**, the City provided a public review period for the Downtown Plan between
24 January 27, 2014 and February 24, 2014 and received three comment letters from Transform, Frank J.
25 Dodd (property owner) and a third joint letter from the Community Coalition for a Sustainable
26 Concord, Greenbelt Alliance, East Bay Housing Organizations, Monument Community
27 Partnership/Michael Chavez Center and Bike East Bay; and

28 **WHEREAS**, staff reviewed the letters received from the public comment period, responded to
the letters, and incorporated applicable feedback in the Downtown Plan, or in some cases more
appropriately will incorporate comments within the Housing Element Update currently being
prepared, and/or the Citywide Bike and Pedestrian Master Plan to be initiated in July 2014; and

1 **WHEREAS**, staff hosted an Urban Land Institute Technical Advisory Panel providing input
2 and findings based on the review of a panel of development and related specialists regarding their
3 examination of Downtown Concord, the findings of which were included (as Attachment 3 – “ULI
4 Recommendations”) to the staff report; and will be incorporated as appropriate to the Downtown Plan
5 adopted by the City Council; and

6 **WHEREAS**, pursuant to the provisions of the California Environmental Quality Act of 1970,
7 Public Resources Code § 21000, et seq., as amended and implementing State CEQA Guidelines, Title
8 14, Chapter 3 of the California Code of Regulations (collectively, “CEQA”) the City determined that
9 preparation of an Addendum to the Final Supplemental Environmental Impact Report (SEIR) to the
10 2030 Concord General Plan EIR for the Concord Development Code project (“Addendum”, a copy of
11 which is attached hereto as Attachment 1 and incorporated by reference) would be the appropriate
12 environmental document to determine if the Downtown Plan would have any significant effect on the
13 environment and meet the requirements of CEQA, due to the fact that: 1) the Preferred Land Use
14 Strategy associated with the Downtown Plan does not propose any rezoning; 2) no increase in traffic
15 is planned beyond that anticipated within the General Plan EIR and the Development Code SEIR; and
16 3) the City has an adopted Citywide Climate Action Plan; and

17 **WHEREAS**, CEQA does not require that addenda to environmental impact reports be
18 circulated to public agencies, nor are responses to comments required. However, as a courtesy, given
19 interest in the project, an Addendum was prepared and made available to the public from January 27,
20 2014 through February 24, 2014; and

21 **WHEREAS**, two comment letters/e-mails were received from the public during that period,
22 with both received on February 24, 2014, from 1) Greenbelt Alliance, and 2) property owner and
23 resident Adam Foster (attached to staff report); for which responses were included within the staff
24 report, but in both cases, it was determined the correspondence did not contain a specific comment
25 regarding the analysis of environmental impacts contained in the Addendum, and therefore the
26 Addendum meets the requirements of CEQA and the City of Concord and no further response is
27 required; and

28 **WHEREAS**, the Planning Commission, after giving all public notices required by State law
and the Concord Municipal Code, held a duly noticed public hearing on May 7, 2014 on the proposed

1 Downtown Plan and the Addendum; and

2 **WHEREAS**, at such public hearing, the Planning Commission considered all oral and written
3 information, plans, testimony, and comments received during the public review process, including
4 information received at the public hearing, the oral report from City staff, the written report from City
5 staff dated May 7, 2014, the Addendum, the General Plan EIR, the SEIR, the General Plan, Municipal
6 Code, Development Code, applicable laws and regulations, and all associated approved and certified
7 environmental documents), and all other information contained in the record of proceedings and the
8 City's files relating to the Specific Plan, which are maintained at the offices of the City of Concord
9 Planning Division (collectively, "Project Information") in accordance with the applicable law,
10 including the requirements of CEQA and the City of Concord Municipal Code; and

11 **WHEREAS**, after consideration of all the Project Information, the Planning Commission
12 declared their intent to recommend that the City Council approve Addendum and the Specific Plan.

13 **NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:**

14 1. The Planning Commission hereby recommends that the City Council approve the Addendum
15 as part of its consideration and approval of the Downtown Plan, and further makes the following
16 findings:

17 1. Recitals. The recitals above are true and correct and are incorporated herein by reference. The
18 recitals constitute findings in this matter and, together with the Project Information, and serve as an
19 adequate and appropriate evidentiary basis for the findings and actions set forth in this Resolution.

20 2. Addendum.

21 a. The Addendum is the appropriate environmental document for the Downtown Plan.

22 b. The environmental documents for the Addendum have been prepared, published,
23 circulated, and reviewed in accordance with all legal requirements, including CEQA Guidelines
24 Section 15164.

25 c. The Planning Commission has reviewed, considered, and evaluated all of the Project
26 Information prior to acting upon or approving the Specific Plan.

27 d. The Addendum reflects the independent judgment and analysis of the City as the lead
28

1 agency for the Specific Plan.

2 e. There is no substantial evidence in light of the whole record before the Planning
3 Commission, that the Specific Plan will have a significant effect on the environment.

4 f. Based on substantial evidence in the whole record before the City, the Specific Plan
5 does not make substantial changes to the General Plan or Development Code or substantial changes
6 with respect to the circumstances under which the General Plan or Development Code would be
7 implemented which would require revisions to the SEIR due to new significant environmental effects
8 or a substantial increase in the severity of previously identified significant effects and there is no new
9 information that would require preparation of a subsequent or supplemental EIR under Public
10 Resources Code Section 21166 or CEQA Guidelines Section 15162. Therefore, none of the elements
11 set forth in Public Resources Code Section 21166 or CEQA Guidelines Section 15162 exist and a
12 subsequent or supplemental EIR or negative declaration is not required.

13 e. As only minor technical changes or additions were required to the SEIR, the
14 Addendum was prepared in accordance with all legal requirements, including CEQA Guidelines
15 Section 15164.

16 f. The mitigation measures described in the SEIR are within the jurisdiction of the City to
17 adopt, and will be implemented.

18 g. All feasible mitigation measures for the Specific Plan identified in the SEIR are hereby
19 incorporated into this resolution.

20 h. The documents and other materials that constitute the record of proceedings upon
21 which the Planning Commission has based its recommendations are located in and may be obtained
22 from the City of Concord Planning Division, 1950 Parkside Drive MS/53, Concord, CA 94519.

23 3. General Plan Amendment. The Planning Commission does hereby make the following
24 findings:

25 a. The Downtown Plan is internally consistent, is consistent with the policies of the
26 General Plan, and is consistent with applicable law.

27 b. The Downtown Plan will not be detrimental to the public interest, health, safety,
28

1 convenience, or welfare of the City in that the Downtown Plan is a strategic document that proposes
2 implementation strategies toward land use, economic vitality, transportation and circulation,
3 infrastructure, design guidelines and funding programs.

4 c. The Planning Commission recommends that the City Council determine that the
5 Downtown Plan is internally consistent, is consistent with the Complete Streets policies adopted by
6 the Council on December 10, 2013, is consistent with the General Plan in general, and is consistent
7 with applicable law.

8 d. The Planning Commission recommends that the City Council determine that after the
9 adoption of the Downtown Plan, the Downtown Plan shall prevail over any conflicts contained in the
10 General Plan, the Development Code, and all other adopted planning goals, objectives and policies of
11 the City. Conflicts shall be resolved by the Planning Manager whose determination is subject to the
12 appeals process contained in the Municipal Code.

13 This resolution shall become effective immediately upon its passage and adoption.

14 **PASSED AND ADOPTED** this 7th day of May, 2014, by the following vote:

15 **AYES:**

16 **NOES:**

17 **ABSTAIN:**

18 **ABSENT:**

19
20 _____
Carol Johnson, AICP
Secretary to the Planning Commission

21 Attachment:

- 22 1 – Addendum to the Final Supplemental Environmental Impact Report (SEIR) to the 2030 Concord
23 General Plan EIR for the Concord Development Code Project
24 2 – Downtown Plan
25 3 – ULI Recommendations
26
27
28

**Addendum to the
Final Supplemental Environmental
Impact Report (SEIR) to the 2030
Concord General Plan EIR for the
Concord Development Code Project**



City of Concord

January 2014

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APPENDICES

Appendix A Transportation Assessment

SECTION 1.0 PURPOSE OF ADDENDUM

The California Environmental Quality Act (CEQA) recognizes that between the date an environmental document is completed and the date the project is fully implemented, one or more of the following changes may occur: 1) the project may change; 2) the environmental setting in which the project is located may change; 3) laws, regulations or policies may change in ways that impact the environment; and/or 4) previously unknown information can arise. Before proceeding with a project, CEQA requires the Lead Agency to evaluate these changes to determine whether or not they affect the conclusions in the environmental document.

The CEQA Guidelines Section 15162 states that when an EIR has been certified or a Negative Declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the Lead Agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR or Negative Declaration;
 - b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

CEQA Guidelines Section 15164 states that the Lead Agency or responsible agency shall prepare an Addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred. The CEQA Guidelines also state that an addendum need not be circulated for public review but can be included in or attached to the final EIR prior to making a decision on the project.

The purpose of this Addendum is to update the *Final Supplemental Environmental Impact Report (SEIR) to the 2030 Concord General Plan Environmental Impact Report for the Concord*

Development Code Project certified in July 2012. Updates in this Addendum are based on recent changes to local, state, and federal regulations, changes to environmental data (i.e., federal and state air quality standards, state greenhouse gas inventory data, and county water supply data), and implementation of the City's *Downtown Concord Specific Plan* (Specific Plan). Updates to Section 3.1 *Air Quality*, Section 3.2 *Greenhouse Gas Emissions*, Section 3.4 *Public Services and Utilities*, and Section 3.5 *Transportation/Traffic* of the SEIR are included in this Addendum. Noise was the other environmental issue addressed in the SEIR (Section 3.3); no updates to this section are required. This Addendum does not require major revisions to the SEIR and impacts in this Addendum are consistent with those in the SEIR. None of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred; therefore, this Addendum to the certified SEIR is consistent with CEQA Guidelines. The Specific Plan will not result in more significant impacts; no changes to and no new mitigation measures are required.

The air quality, greenhouse gas emissions, and public services and utilities sections were updated based on changes to agency regulations and new data. The Transportation/Traffic section was reviewed and updated as appropriate to confirm that no new impacts would occur as a result of implementation of the Specific Plan, as described in this Addendum.

Conditions within the Downtown Concord Priority Development Area (PDA) have not changed substantially since the SEIR was adopted and the Specific Plan proposes development essentially identical to that envisioned in the General Plan and SEIR. The Specific Plan is a refinement of the General Plan to provide more detail and mechanisms to further encourage pedestrian-friendly, business-oriented development in Downtown Concord.

SECTION 2.0 SEIR AND SPECIFIC PLAN BACKGROUND

2.1 SEIR BACKGROUND

In October 2007, the Concord City Council adopted the *Concord 2030 Urban Area General Plan* (General Plan), which provides a framework for the urban area and articulates a vision for the City over the next 20 years. The General Plan includes a number of key themes and initiatives, such as the integration of economic development into land use planning, greater support of mixed-use development and transit-supportive land uses around the Downtown Bay Area Rapid Transit (BART) station and transportation corridors, and an emphasis on preserving environmental resources and community assets.

In connection with the City's approval of the General Plan, the City certified the *Final Environmental Impact Report for the Concord 2030 Urban Area General Plan* (General Plan EIR) in 2007, which evaluates at a program level, the environmental consequences of the General Plan and alternatives to the project, and includes mitigation measures to reduce or avoid the General Plan's significant environmental effects. Subsequent projects can then tier from the General Plan EIR.

In July 2012, the City of Concord certified the *Final Supplemental Environmental Impact Report (SEIR) to the 2030 Concord General Plan EIR for the Concord Development Code Project*. The Concord Development Code Project includes four major components: 1) amendments to the Concord 2030 General Plan text and General Plan Land Use Map; 2) adoption of the new Development Code (Concord 2012 Development Code); and 3) a new zoning map. The SEIR describes the potential impacts relating to a number of environmental issues associated with adoption of the Concord 2012 Development Code and related General Plan Land Use Map changes, and methods by which these impacts could be mitigated or avoided.

Over the past year (2013), the City has prepared the *City of Concord Downtown Concord Specific Plan* (Specific Plan), utilizing a grant from the Metropolitan Transportation Commission (MTC). The Specific Plan was developed through a public planning process, based on goals and policies of the Concord 2030 General Plan. The proposed Specific Plan outlines policies focused on what is achievable to implement in Downtown Concord over the next 20 to 30 years and sets forth actions and policies to be implemented by the City of Concord focusing on revitalizing the Downtown Concord PDA, accommodating growth in a future population and employment base combined with transportation and urban design implementation strategies (refer to Section 2.2 *Summary of the Downtown Concord Specific Plan* of this Addendum for a more detailed description of the Specific Plan).

2.2 SUMMARY OF THE DOWNTOWN CONCORD SPECIFIC PLAN

In general, a Specific Plan is a program-level tool for the systematic implementation of an adopted General Plan. A Specific Plan describes broad policy concepts and provides direction as to various aspects of development including the type, location and intensity of uses, design, and capacity of infrastructure.

The *Downtown Concord Specific Plan* establishes the character of streetscapes, the character and intensity of commercial and residential development, the circulation pattern (vehicular, pedestrian, bicycle and transit), and parking strategies to support businesses and overall vitality, while enhancing access and connectivity. The Specific Plan includes standards and guidelines for public and private enhancements to the Downtown Concord PDA and it offers strategies for financing and implementing public improvements.

More specifically, the purpose of the Specific Plan is to: 1) address the need for a development framework and account for all modes of transportation for the Downtown Concord PDA, 2) ensure that the City of Concord's current planning and economic efforts are reflected, including the goals and desires of the Downtown Concord residents and businesses; 3) plan in a manner that meets projected population and job growth needs; and 4) achieve the jobs/housing balance objectives, increase housing in Downtown Concord, and meet state law requirements for Concord's allocation of regional housing needs.

The proposed Specific Plan land use designations are consistent with General Plan and the Concord Development Code designations. The proposed land uses in the Specific Plan were developed in accordance with the General Plan and the Concord Development Code. Specific Plan implementation would not significantly increase the intensity of land uses, beyond what is already planned for in the General Plan and Concord Development Code, and does not require any changes to land use designations. The Specific Plan recognizes that the allowable densities and floor area ratios (FARs) in the current code are sufficient to achieve the goals of the Specific Plan. The proposed FARs for development in the Specific Plan are within the City's existing density allowances.

The Specific Plan proposes to implement new transportation/circulation policies that would develop a network of pedestrian friendly streets that integrate walking, biking, transit use and green infrastructure while improving access to BART and connecting Downtown Concord to the rest of the region. Transportation/circulation policies, which are consistent with the General Plan and Concord Development Code, are outlined in Section 3.5 *Transportation/Traffic* of this Addendum. The Specific Plan includes transportation/circulation goals and policies consistent with the General Plan.

Adoption of the Specific Plan would only require minor revisions to the SEIR. Additionally, the Specific Plan is consistent with the General Plan and Concord 2012 Development Code goals and will assist in the implementation of these goals. Proposed revisions to the SEIR are included in Section 3.0 *Environmental Checklist and Impacts of Proposed Changes to the SEIR* of this Addendum.

SECTION 3.0 ENVIRONMENTAL CHECKLIST AND IMPACTS OF PROPOSED CHANGES TO THE SEIR

This Addendum to the *SEIR to the 2030 Concord General Plan Environmental Impact Report for the Concord Development Code Project* evaluates the environmental impacts that could result from the minor changes in uses within the Downtown Concord PDA that were not addressed in the previously certified EIR. With the exception of the transportation/traffic and public services and utilities sections, all changes to the SEIR are due to changes in regulatory policies and law and resulting changes in data. Because the proposed project is not anticipated to result in new significant impacts and would not require major revisions to the previously prepared SEIR, an Addendum has been prepared for the proposed project (CEQA Guidelines Sections 15162 and 15164), rather than a supplemental or subsequent EIR.

This section describes any changes that have occurred in existing environmental conditions on and near the project area, as well as the environmental impacts associated with the proposed Specific Plan or the changed conditions. The environmental checklist, as recommended in the California Environmental Quality Act (CEQA) Guidelines, was used to compare the environmental impacts of the “Proposed Project (Specific Plan)” with those of the “Approved Project (Concord Development Code Project)” and to identify whether the Proposed Project would likely result in new significant environmental impacts not previously evaluated in the EIR. The right-hand column in the checklist lists the source(s) for the answer to each question. The sources cited are identified in Section 5.0.

Mitigation measures are identified for all significant project impacts. “Mitigation Measures” are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). This analysis assumes all applicable mitigation measures identified in the previous program SEIR will be implemented by the project.

3.1 AIR QUALITY

Changes to air quality standards, laws and regulations have occurred since the adoption of the SEIR. This section also lists air quality standards that were established before the adoption of SEIR but were not included in the SEIR. Additionally, the section describes recent updates to BAAQMD’s CEQA Air Quality Guidelines.

3.1.1 Proposed Revisions to SEIR

Regulatory Framework

Federal and State Air Quality Standards

Federal and state ambient air quality standards are listed in Table 3.1-3 of the SEIR. Updates to the federal and state ambient air quality standards, including annual mean data, have been added to Table 3.1-3. The following Table 3.1-3 (listed below) includes updated data (shown in italics) and supersedes Table 3.1-3 in the SEIR:

Table 3.1-3 Federal and State Ambient Air Quality Standards			
Air Pollutant	Averaging Time	California Standard	National Standard
Ozone	1-hour	0.090 ppm	--
	8-hour	0.070 ppm	0.075 ppm
Particulate Matter (PM₁₀)	24-hour	50 µg/m ³	150 µg/m ³
	Annual Mean	20 µg/m ³	--
Particulate Matter (PM_{2.5})	24-hour	--	35 µg/m ³
	Annual Mean	12 µg/m ³	15 µg/m ³
Carbon Monoxide (CO)	1-hour	20 ppm	35 ppm
	8-hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO₂)	1-hour	0.18 ppm	0.100 ppm
	Annual Mean	0.030 ppm	0.053 ppm
Sulfur Dioxide (SO₂)	1-hour	0.25 ppm	0.075 ppm
	24-hour	0.040 ppm	<i>0.14 ppm¹</i>
	<i>Annual Mean²</i>	--	<i>0.030 ppm³</i>
Lead	30-day Average	1.5 µg/m ³	--
	Calendar Quarter	--	1.5 µg/m ³
	Rolling 3-Month Average	--	0.15 µg/m ³

Air Pollutant	Averaging Time	California Standard	National Standard
Hydrogen Sulfide	1-hour	0.030 ppm	--
Sulfates	24-hour	25 $\mu\text{g}/\text{m}^3$	--
Vinyl Chloride	24-hour	0.010 ppm	--
Notes ¹ The National Ambient Air Quality Standard (NAAQS) for 24-hour SO ₂ data is an addition to the SEIR. ² Annual mean standards for SO ₂ is an addition to the SEIR. $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter ppm = parts per million -- = Standards not determined Source: BAAQMD. <i>Air Quality Standards and Attainment Status</i> . Available at: http://hank.baaqmd.gov/pln/air_quality/ambient/air_quality.htm . Accessed November 26, 2013.			

Thresholds of Significance

The Bay Area Air Quality Management District (BAAQMD) thresholds of significance are discussed in the SEIR in Section 3.1.6 *Thresholds of Significance, BAAQMD Thresholds*.

The following text is an update to the text in *Section 3.1.6 Thresholds of Significance* of the SEIR under *BAAQMD Thresholds*. This section provides an update to the California Building Industry Association lawsuit and provides a table of emissions thresholds based on *BAAQMD CEQA Air Quality Guidelines*:

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the Lead Agency and must be based to the extent possible on scientific and factual data. The City of Concord and other Lead Agencies in the San Francisco Bay Area Air Basin often utilize the thresholds and methodology for assessing air emissions and/or health effects adopted by BAAQMD based upon the scientific and other factual data prepared by BAAQMD in developing those thresholds.

In December 2010, the California Building Industry Association (BIA) filed a lawsuit in Alameda County Superior Court challenging toxic air contaminants (TACs) and particulate matter with particle sizes that are 2.5 micrometers in diameter and smaller (PM_{2.5}) thresholds adopted by BAAQMD in its 2010 CEQA Air Quality Guidelines (*California Building Industry Association v. Bay Area Air Quality Management District*, Alameda County Superior Court Case No. RG10548693). One of the identified concerns was inhibiting infill and smart growth in the urbanized Bay Area. On March 5, 2012, the Superior Court found that the adoption of thresholds by the BAAQMD in its CEQA Air Quality Guidelines is a CEQA project and BAAQMD is not to disseminate officially sanctioned air quality thresholds of significance until BAAQMD fully complies with CEQA.

At the time that the SEIR was adopted, it was unclear if the ruling would be appealed or if BAAQMD would proceed with preparing the appropriate CEQA documentation. The decision was appealed to the California Court of Appeal, First District (case A136212), where it was overturned.

Based on the Court of Appeal's decision, the City has carefully considered the thresholds (established in June 2010 and updated in May 2011) previously prepared by BAAQMD and regards the thresholds listed below to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and PM_{2.5}. Evidence supporting these thresholds has been presented in the following documents:

- BAAQMD. *Thresholds Options and Justification Report*. 2009.
- BAAQMD. *CEQA Air Quality Guidelines*. June 2010. Updated May 2011.
- California Air Pollution Control Officers Association (CAPCOA). *Health Risk Assessments for Proposed Land Use Projects*. 2009.
- California Environmental Protection Agency, California Air Resources Board (CARB). *Air Quality and Land Use Handbook: A Community Health Perspective*. 2005.

Based on the above information, the following table (Table 3.1-6) is an addition to the SEIR.

Table 3.1-6 BAAQMD Thresholds of Significance Used in Air Quality Analyses			
Pollutant	Construction	Operation-Related	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (tons/year)
Reactive Organic Gases, Nitrogen Oxides	54	54	10
PM₁₀¹	82 (exhaust)	82	15
PM_{2.5}²	54 (exhaust)	54	10
Fugitive Dust (PM₁₀/PM_{2.5})	BMPs ³	None	None
Risk and Hazards for New Sources and Receptors (Project)	Same as Operational Threshold	<ul style="list-style-type: none"> • Increased cancer risk of >10.0 in one million • Increased non-cancer risk of > 1.0 Hazard Index (chronic or acute) • Ambient PM_{2.5} increase: > 0.3 μ/m³ [Zone of influence: 1,000-foot radius from property line of source or receptor] 	
Risk and Hazards for New Sources and Receptors (Cumulative)	Same as Operational Threshold	<ul style="list-style-type: none"> • Increased cancer risk of >100 in one million • Increased non-cancer risk of > 10.0 Hazard Index (chronic or acute) • Ambient PM_{2.5} increase: > 0.8 μ/m³ 	

Table 3.1-6 BAAQMD Thresholds of Significance Used in Air Quality Analyses			
Pollutant	Construction	Operation-Related	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (tons/year)
		[Zone of influence: 1,000-foot radius from property line of source or receptor]	
Odors		Five confirmed complaints per year averaged over three years	
Notes ¹ Particulate Matter greater than 2.5 micrometers and less than 10 micrometers in diameter ² Particulate Matter greater than 2.5 micrometers or less in diameter ³ Best Management Practices ⁴ μ/m ³ = micrometer per cubic meter Sources: <i>BAAQMD Thresholds Options and Justification Report (2009)</i> and <i>BAAQMD CEQA Air Quality Guidelines</i> (dated May 2011).			

3.1.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-5
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard including releasing emissions which exceed quantitative thresholds for ozone precursors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,4,6
4. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,4,6

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
5. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,6

3.1.2.1 Air Quality Impacts

With the implementation of General Plan policies, BAAQMD CEQA Air Quality Guidelines (updated May 2011), and state and federal regulations, the Specific Plan adoption would not result in a significant air quality impact not previously identified. Projects implemented under the Specific Plan would comply with BAAQMD’s thresholds and would be consistent with General Plan goals and policies set forth to reduce air quality impacts. Pollutant emissions resulting from the Specific Plan’s land uses are assumed in the General Plan and would be consistent with state and/or federal ambient air quality standards.

3.1.3. Conclusion

The Specific Plan would be in accordance the BAAQMD 2010 Clean Air Plan. The Specific Plan would allow high density office/commercial zoning and housing developments, consistent with the General Plan and Concord Development Code near the Downtown Concord BART station and transit connections with the goal of reducing daily vehicle trips and vehicle miles traveled.
(Less Than Significant Impact [Same as approved SEIR])

Implementation of the Specific Plan would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Projects implemented within the Plan Area would comply with BAAQMD standards and General Plan policies.
(Less Than Significant Impact [Same as approved SEIR])

Implementation of the Specific Plan would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard including releasing emissions which exceed quantitative thresholds for ozone precursors. Projects within the Downtown Concord PDA would be consistent with the BAAQMD 2010 Clean Air Plan and General Plan policies.
(Less Than Significant Impact [Same as approved SEIR])

Implementation of the Specific Plan would not expose sensitive receptors to substantial pollutant concentrations. The Specific Plan would not create new sources of toxic air contaminants near or proposed sensitive receptors relative to the existing General Plan.
(Less Than Significant Impact [Same as approved SEIR])

Implementation of the Specific Plan would not create objectionable odors affecting a substantial number of people. The Specific Plan would not create new sources of odors near existing or proposed sensitive receptors relative to the existing General Plan.

(Less Than Significant Impact [Same as approved SEIR])

3.2 GREENHOUSE GASES

Since the adoption of the SEIR to the 2030 General Plan EIR for the Concord Development Code Project, the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) has adopted *Plan Bay Area* and the City of Concord has adopted the *Citywide Climate Action Plan (Citywide CAP)*¹. New data has been added to the California Air Resources Board's Greenhouse Gas Inventory since the adoption of the SEIR.² The section below describes the aforementioned changes.

3.2.1 Proposed Revisions to SEIR

3.2.1.1 *Regulatory Framework*

SB 375 and Adopted Plan Bay Area

Section 3.2.4 - *Regulatory Framework, State, SB 375* of the SEIR describes the sustainable communities strategy (SCS) required by California Metropolitan Planning Organizations (MPOs) under Senate Bill 375. The MTC is the MPO for the San Francisco Bay Area (including Contra Costa County).

Consistent with the requirements of SB 375, the MTC has partnered with ABAG, BAAQMD, and the Bay Conservation and Development Commission (BCDC) to prepare the region's SCS as part of the regional transportation plan (RTP) process.³ The SCS is referred to as *Plan Bay Area*.

The original projected date for the adoption of the Plan Bay Area was April 2013 (per Section 3.2.4 of the SEIR). MTC and ABAG, however, adopted *Plan Bay Area* in July 2013. The strategies in the plan are intended to promote compact, mixed-use development close to public transit, jobs, schools, shopping, parks, recreation, and other amenities, particularly within PDAs identified by local jurisdictions.

Adopted Climate Action Plan

Section 3.2.4 - *Regulatory Framework, Regional and Local* of the SEIR describes regional and local climate action plans/programs that have been adopted to reduce local, regional, and statewide GHG emissions. Since the certification of the SEIR, the City of Concord has adopted the Citywide CAP to identify policies that would help reduce GHG emissions and the state (California) reach its GHG emissions reduction goals.

¹ City of Concord. *City of Concord Citywide Climate Action Plan*. July 2013.

² California Air Resources Board. *California Greenhouse Gas Inventory for 2000-2011 – by Category as Defined in the 2008 Scoping Plan*. Last Updated August 2013. Available at:

<<http://www.arb.ca.gov/cc/inventory/data/data.htm>>. Accessed November 22, 2013.

³ ABAG, BAAQMD, BCDC, and MTC. *One Bay Area Frequently Asked Questions*. Available at:

<http://onebayarea.org/about/faq.html#UQceKR2_DAk>. Accessed November 22, 2013.

City of Concord

The following section supplements the discussion of the Citywide CAP in Section 3.2-4 of the SEIR:

Concord Citywide Climate Action Plan

The Concord *Citywide Climate Action Plan* (Citywide CAP) was adopted in July 2013 in response to mandates from the State of California intended to reduce the emission of greenhouse gases statewide, because of their contribution to global climate change. The Citywide CAP identifies how the City will take action consistent with the state’s goals while supporting the local economy and quality of life. The Citywide CAP is anticipated to bring the amended General Plan into compliance with regional and statewide greenhouse gas emission reduction goals, and incorporate regional reduction targets developed pursuant to SB 375.

3.2.1.2 Environmental Setting

Section 3.2.3 *Environmental Setting, Emissions Inventory and Trends* of the SEIR describes greenhouse gas (GHG) emissions and trends by sector in California and the San Francisco Bay Area. Table 3.2-1 *California Greenhouse Gas Inventory 2000-2008* in the SEIR shows the biannual inventory for California’s GHG emissions from 2000 to 2008 (i.e., 2002, 2004, 2006, and 2008). Since more recent greenhouse gas inventory data is now available, the following Table 3.2-1 *California Gas Inventory 2001 – 2011* (which shows biannual data for 2001, 2003, etc.) supersedes the existing Table 3.2-1 in the SEIR. Greenhouse gas inventory data for the odd-numbered years (between 2001 and 2011) is included in Table 3.2-1 below.

Table 3.2-1 California Greenhouse Gas Inventory 2001 -2011 (Biannual)						
<i>Main Sector</i>	<i>Emissions MM CO₂e¹ per Year</i>					
	2001	2003	2005	2007	2009	2011
Agriculture and Forestry	29.23	32.84	32.81	32.94	31.69	32.24
Commercial	14.43	14.05	14.34	15.13	15.53	15.62
Electricity Generation (Imports)	59.03	64.57	62.81	59.81	48.05	46.86
Electricity Generation (In-State)	62.98	48.05	45.05	54.12	55.52	39.71
Industrial	93.85	93.42	94.23	88.79	84.43	93.24
Recycling and Waste	6.26	6.32	6.47	6.57	6.81	7.00
Residential	28.72	28.41	28.18	28.69	28.65	29.85
Transportation	176.65	183.55	188.94	188.97	171.57	168.42
High Global Warming Potential (GWP) ²	7.12	7.87	9.25	10.50	12.45	15.17
Total	478.27	479.08	482.09	485.54	454.69	448.11
Notes ¹ Million metric tons of CO ₂ equivalent ² Includes Ozone depleting substance substitutes, electricity grid losses, and semiconductor manufacturing Source: California Air Resources Board. <i>California Greenhouse Gas Inventory for 2000-2011 – by Category as Defined in the 2008 Scoping Plan</i> . Last Updated August 2013. Available at: http://www.arb.ca.gov/cc/inventory_data/data.htm . Accessed November 22, 2013.						

3.2.2 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,4,6
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,4,7

3.2.2.1 Greenhouse Gas Impacts

Greenhouse Gas Generation Impacts

Impact Analysis

As a result of the adoption of the Citywide CAP (July 2013), the following paragraph will supersede the second paragraph of Section 3.2.7 *Project Impacts and Mitigation Measures Greenhouse Gas Generation, Impact Analysis* in the SEIR:

As previously stated, the City adopted a Citywide CAP (July 2013). The Citywide CAP includes greenhouse gas emissions data for the City of Concord. The following text supplements the fourth paragraph of Section 3.2.7 *Project Impacts and Mitigation Measures Greenhouse Gas Generation, Impact Analysis* in the SEIR:

Forecasted GHG emissions for the City of Concord in 2035 without mitigation is 1,503,498 MTCO₂e. Based on the adopted Citywide CAP, the citywide emissions target for 2035 is 959,474 MTCO₂e. With implementation of the Citywide CAP, the projected emissions for 2035 is 741,271 MTCO₂e.⁴ The Citywide CAP is consistent with the General Plan's goals and policies that support reductions in GHG emissions, particularly in the Specific Plan area. Because land uses and densities assumed in the General Plan and Concord Development Code are consistent with the Specific Plan, implementation of the Specific Plan would not result in significant GHG emissions impacts.

⁴City of Concord. *Citywide Climate Action Plan. Attachment A: Draft Forecast Calculations*. Adopted July 2013.

Mitigation Measures

The following text supplements Section 3.2.7 *Project Impacts and Mitigation Measures Greenhouse Gas Generation, Mitigation Measures* of the SEIR:

Greenhouse gas reduction goals and targets from the Citywide CAP are listed under mitigation measure (MM) GHG-1 in the SEIR. In the SEIR, the second measure of MM GHG-1 indicates that the citywide CAP shall establish a level below which the contribution to GHG emissions from activities covered by the General Plan would not be cumulatively considerable. The second measure of MM GHG-1 also indicates that the City's carbon dioxide equivalent (CO₂e) plan-level emissions threshold (an emissions threshold for an adopted plan) could be the BAAQMD 2020 plan-level threshold, which is 6.6 metric tons CO₂e/person/year, or an emissions reduction level determined in consultation with BAAQMD and ABAG. While the BAAQMD 2020 plan-level threshold is 6.6 metric tons CO₂e (MTCO₂e)/person/year, it would be contrary to the purpose of the Citywide CAP to include a target that is higher than the current emissions of 5.0 MTCO₂e (based on 2005 baseline data provided in the Citywide CAP). Based on BAAQMD's guidance, the City used the baseline figure of 5.0 MTCO₂e as the Citywide CAP target for 2020, and established greater reductions for 2030 (4.0 MTCO₂e threshold) and 2035 (3.2 MTCO₂e threshold).

While Impact GHG-1 of the SEIR continues to be accurate, given that the Citywide CAP was adopted (July 2013) subsequent to the SEIR's certification, the MM GHG-1 has been revised as follows:

Impact GHG-1: Implementation of the Specific Plan and General Plan could generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Mitigation Measure: Implementation of the adopted Citywide CAP would reduce impacts from the implementation of the Specific Plan and General Plan to a less than significant level.

MM GHG-1: The City has incorporated the following components and performance measures into the citywide Climate Action Plan (adopted July 2013):

- The Citywide CAP quantifies greenhouse gas emissions, both existing and projected to the end date of the General Plan, resulting from activities within the city limits.
- The Citywide CAP establishes a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the General Plan would not be cumulatively considerable. This level is:
 - A citywide demonstration of the 5.0 MTCO₂e per service population metric, or
- The Citywide CAP identifies and analyzes greenhouse gas emissions resulting from specific actions or categories of actions anticipated to occur within the city limits.

- The Citywide CAP specifies measures, including performance standards, which demonstrate with substantial evidence that if implemented on a project-by project basis, the specified emissions level would be achieved.
- The Citywide CAP establishes a mechanism to monitor the plan's progress toward achieving the level described above (second bullet point of **MM GHG-1** of this Addendum) and requires an amendment if the Citywide CAP is not achieving the specified levels.

(Less Than Significant Impact with Mitigation [Same as Approved Project])

Consistency with Applicable Plans and Policies

Impact Analysis

Implementation of the Specific Plan, which is consistent with General Plan policies that serve to reduce GHG emissions would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases.

(Less Than Significant Impact [Same as Approved Project])

3.2.3 Conclusion

With the implementation of **MM GHG-1**, Citywide CAP, and local goals and policies, greenhouse gas emissions that are generated as a result of implementation the Specific Plan, would not result in a significant GHG emissions impact.

(Less Than Significant Impact with Mitigation [Same as Approved Project])

Implementation of the Specific Plan, consistent with the Citywide CAP, would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases. **(Less Than Significant Impact [Same as Approved Project])**

3.4 PUBLIC SERVICES AND UTILITIES

This section is an update to Section 3.4.3 *Environmental Setting, Potable Water, Reliability* of the SEIR and the City's water supply data. As mentioned in the SEIR, the City's water supplier is Contra Costa Water District (CCWD), which provides water service to the City from the Sacramento/San Joaquin Delta.

This section is also an update to the California Energy Commission's Energy Efficiency Standards listed in Section 3.4.4 *Regulatory Framework, State, Title 24, California's Energy Efficiency Standards for Residential and Non-residential Buildings* of the SEIR. The energy standards established in 2005 were listed in the SEIR; this section includes the standards established in 2008, the most recent standards available.

3.4.1 Environmental Setting

Tables 3.4.1 through 3.4.5, in Section 3.4.3 *Environmental Setting, Potable Water: Reliability* of the SEIR have been updated in accordance with CCWD's 2011 *Urban Water Management Plan* (UWMP). The 2011 UWMP is an update to the 2005 UWMP. The tables below show the existing and planned sources of water supply for the City and their expected availability under various supply conditions in five year increments through 2035. The updated data is shown in italics in the Tables 3.4.1 through 3.4.5 below.

**Table 3.4-1
Projected Water Supply (Normal Year)**

Normal ¹ Year	CVP ² (af/yr)	Industrial Diversions (af/yr)	Mallard ³ Slough (af/yr)	Antioch Diversions ⁴ (af/yr)	Groundwater ⁵ (af/yr)	East Contra Costa County		Recycled Water ⁷ (af/yr)	Planned Purchases (af/yr)	Conservation Savings ⁸ (af/yr)	Total Planned Supply (af/yr)
						Irrigation Purchases (af/yr)	LJ ⁶ Supply ⁶				
<i>Near-Term</i>	170,000	10,000	3,100	6,400	3,000	6,000	-	8,500	-	7,900	214,900
2015	183,000	10,000	3,100	6,400	3,000	7,100	-	10,500	-	11,000	234,100
2020	195,000	10,000	3,100	6,400	3,000	8,200	-	12,500	-	16,200	250,900
2025	195,000	10,000	3,100	6,400	3,000	8,200	-	13,300	-	17,000	256,000
2030	195,000	10,000	3,100	6,400	3,000	8,200	-	14,100	-	19,200	259,000
2035	195,000	10,000	3,100	6,400	3,000	8,200	-	14,800	-	21,200	261,700

Notes:

af/yr = acre-feet per year

1. Basis of water year data is as follows: Normal (Average) represents a below normal or wetter year on the Sacramento River Hydrologic Region 40-30-30 Water Supply Index. Single-Year drought represents 1977 conditions. Multiple-Year drought sequence represents 1987-1992 conditions.
2. The Central Valley Project (CVP) conditions used for supply planning are defined as follows: Normal is Adjusted Historical Use. Single Year Drought supply is 75 percent of Historical Use. Multi-year drought (year 1) supply is 85 percent of Historical Use. Multi-Year Drought (year 2) is 75 percent of Historical Use. Multi-Year Drought (year 3) is 65 percent of Historical Use.
3. Mallard Slough average annual diversion over 15 year period (1995-2009).
4. Antioch Diversion is average annual diversion over 11 year period since pumping plant improvements (1999-2009).
5. Groundwater represents production from Mallard Wells, municipal customer owned wells, and miscellaneous other wells in the District's service area.
6. Anticipated water supply reliability benefit resulting from expansion of Los Vaqueros Reservoir.
7. Recycled water does not include wildlife habitat enhancement and wetlands or plant use.
8. Anticipated conservation savings, including both active and passive conservation.

**Table 3.4-2
Projected Water Supply (Single-Year Drought)**

Single-Year Drought ¹	CVP ² (af/yr)	Industrial Diversions (af/yr)	Mallard ³ Slough (af/yr)	Antioch Diversions ⁴ (af/yr)	Groundwater ⁵ (af/yr)	East Contra Costa County Irrigation Purchases (af/yr)	L1 ⁶ Supply ⁶ (af/yr)	Recycled Water ⁷ (af/yr)	Planned Purchases (af/yr)	Conservation Savings ⁸ (af/yr)	Total Planned Supply (af/yr)
Near-Term	127,500	0	0	0	3,000	10,000	10,000	8,500	-	7,900	166,900
2015	137,250	0	0	0	3,000	11,100	10,000	10,500	-	11,000	182,900
2020	146,250	0	0	0	3,000	12,200	10,000	12,500	-	16,200	197,500
2025	146,250	0	0	0	3,000	12,200	10,000	13,300	-	17,000	201,800
2030	146,250	0	0	0	3,000	12,200	10,000	14,100	3,100	19,200	207,900
2035	146,250	0	0	0	3,000	12,200	10,000	14,800	7,200	21,200	214,700

Notes:

- af/yr = acre-feet per year
- 1. Basis of water year data is as follows: Normal (Average) represents a below normal or wetter year on the Sacramento River Hydrologic Region 40-30-30 Water Supply Index. Single-Year drought represents 1977 conditions. Multiple-Year drought sequence represents 1987-1992 conditions.
- 2. The Central Valley Project (CVP) conditions used for supply planning are defined as follows: Normal is Adjusted Historical Use. Single Year Drought supply is 75 percent of Historical Use. Multi-year drought (year 1) supply is 85 percent of Historical Use. Multi-Year Drought (year 2) is 75 percent of Historical Use. Multi-Year Drought (year 3) is 65 percent of Historical Use.
- 3. Mallard Slough average annual diversion over 15 year period (1995 - 2009).
- 4. Antioch Diversions is average annual diversion over 11 year period since pumping plant improvements (1999-2009).
- 5. Groundwater represents production from Mallard Wells, municipal customer owned wells, and miscellaneous other wells in the District's service area.
- 6. Anticipated water supply reliability benefit resulting from expansion of Los Vaqueros Reservoir.
- 7. Recycled water does not include wildlife habitat enhancement and wetlands or plant use.
- 8. Anticipated conservation savings, including both active and passive conservation.

**Table 3.4-3
Projected Water Supply (Multi-Year Drought – Year 1)**

Multi-Year Drought (Year 1) ¹	CVP ² (af/yr)	Industrial Diversions (af/yr)	Mallard ³ Slough (af/yr)	Antioch Diversions ⁴ (af/yr)	Groundwater ⁵ (af/yr)	East Contra Costa County Irrigation Purchases (af/yr)	LJ ⁶ Supply ⁶ (af/yr)	Recycled Water ⁷ (af/yr)	Planned Purchases (af/yr)	Conservation Savings ⁸ (af/yr)	Total Planned Supply (af/yr)
Near-Term	144,500	0	0	0	3,000	10,000	10,000	8,500	-	7,900	183,900
2015	155,550	0	0	0	3,000	11,100	10,000	10,500	-	11,000	201,200
2020	165,750	0	0	0	3,000	12,200	10,000	12,500	-	16,200	216,700
2025	165,750	0	0	0	3,000	12,200	10,000	13,300	-	17,000	221,300
2030	165,750	0	0	0	3,000	12,200	10,000	14,100	3,100	19,200	227,400
2035	165,750	0	0	0	3,000	12,200	10,000	14,800	7,200	21,200	234,200

Notes:

af/yr = acre-feet per year

1. Basis of water year data is as follows: Normal (Average) represents a below normal or wetter year on the Sacramento River Hydrologic Region 40-30-30 Water Supply Index. Single-Year drought represents 1977 conditions. Multiple-Year drought sequence represents 1987-1992 conditions.

2. The Central Valley Project (CVP) conditions used for supply planning are defined as follows: Normal is Adjusted Historical Use. Single Year Drought supply is 75 percent of Historical Use. Multi-year drought (year 1) supply is 85 percent of Historical Use. Multi-Year Drought (year 2) is 75 percent of Historical Use. Multi-Year Drought (year 3) is 65 percent of Historical Use.

3. Mallard Slough average annual diversion over 15 year period (1995 - 2009).

4. Antioch Diversions is average annual diversion over 11 year period since pumping plant improvements (1999-2009).

5. Groundwater represents production from Mallard Wells, municipal customer owned wells, and miscellaneous other wells in the District's service area.

6. Anticipated water supply reliability benefit resulting from expansion of Los Vaqueros Reservoir.

7. Recycled water does not include wildlife habitat enhancement and wetlands or plant use.

8. Anticipated conservation savings, including both active and passive conservation.

**Table 3.4-4
Projected Water Supply (Multi-Year Drought – Year 2)**

Multi-Year Drought (Year 2) ¹	CVP ² (af/yr)	Industrial Diversions (af/yr)	Mallard ³ Slough (af/yr)	Antioch Diversions ⁴ (af/yr)	Groundwater ⁵ (af/yr)	East Contra Costa County Irrigation Purchases (af/yr)	LV Supply ⁶ (af/yr)	Recycled Water ⁷ (af/yr)	Planned Purchases (af/yr)	Conservation Savings ⁸ (af/yr)	Total Planned Supply (af/yr)
<i>Near-Term</i>	127,500	0	0	0	3,000	10,000	10,000	8,500	-	7,900	166,900
2015	137,250	0	0	0	3,000	11,100	10,000	10,500	-	11,000	182,900
2020	146,250	0	0	0	3,000	12,200	10,000	12,500	-	16,200	197,500
2025	146,250	0	0	0	3,000	12,200	10,000	13,300	-	17,000	201,800
2030	146,250	0	0	0	3,000	12,200	10,000	14,100	3,100	19,200	207,900
2035	146,250	0	0	0	3,000	12,200	10,000	14,800	7,200	21,200	214,700

Notes:

af/yr = acre-feet per year

1. Basis of water year data is as follows: Normal (Average) represents a below normal or wetter year on the Sacramento River Hydrologic Region 40-30-30 Water Supply Index. Single-Year drought represents 1977 conditions. Multiple-Year drought sequence represents 1987-1992 conditions.
2. The Central Valley Project (CVP) conditions used for supply planning are defined as follows: Normal is Adjusted Historical Use. Single Year Drought supply is 75 percent of Historical Use. Multi-year drought (year 1) supply is 85 percent of Historical Use. Multi-Year Drought (year 2) is 75 percent of Historical Use. Multi-Year Drought (year 3) is 65 percent of Historical Use.
3. Mallard Slough average annual diversion over 15 year period (1995 - 2009).
4. Antioch Diversions is average annual diversion over 11 year period since pumping plant improvements (1999-2009).
5. Groundwater represents production from Mallard Wells, municipal customer owned wells, and miscellaneous other wells in the District's service area.
6. Anticipated water supply reliability benefit resulting from expansion of Los Vaqueros Reservoir.
7. Recycled water does not include wildlife habitat enhancement and wetlands or plant use.
8. Anticipated conservation savings, including both active and passive conservation.

**Table 3.4-5
Projected Water Supply (Multi-Year Drought – Year 3)**

Multi-Year Drought (Year 3) ¹	CVP ² (af/yr)	Industrial Diversions (af/yr)	Mallard ³ Slough (af/yr)	Antioch Diversions ⁴ (af/yr)	Groundwater ⁵ (af/yr)	East Contra Costa County Irrigation Purchases (af/yr)	LF Supply ⁶ (af/yr)	Recycled Water ⁷ (af/yr)	Planned Purchases (af/yr)	Conservation Savings ⁸ (af/yr)	Total Planned Supply (af/yr)
<i>Near-Term</i>	110,500	0	0	0	3,000	10,000	10,000	8,500	-	7,900	149,900
2015	118,950	0	0	0	3,000	11,100	10,000	10,500	-	11,000	164,600
2020	126,750	0	0	0	3,000	12,200	10,000	12,500	-	16,200	178,400
2025	126,750	0	0	0	3,000	12,200	10,000	13,300	-	17,000	182,300
2030	126,750	0	0	0	3,000	12,200	10,000	14,100	3,100	19,200	188,400
2035	126,750	0	0	0	3,000	12,200	10,000	14,800	7,200	21,200	195,200

Notes:

af/yr = acre-feet per year

1. Basis of water year data is as follows: Normal (Average) represents a below normal or wetter year on the Sacramento River Hydrologic Region 40-30-30 Water Supply Index. Single-Year drought represents 1977 conditions. Multiple-Year drought sequence represents 1987-1992 conditions.
2. The Central Valley Project (CVP) conditions used for supply planning are defined as follows: Normal is Adjusted Historical Use. Single Year Drought supply is 75 percent of Historical Use. Multi-year drought (year 1) supply is 85 percent of Historical Use. Multi-Year Drought (year 2) is 75 percent of Historical Use. Multi-Year Drought (year 3) is 65 percent of Historical Use.
3. Mallard Slough average annual diversion over 15 year period (1995 - 2009).
4. Antioch Diversions is average annual diversion over 11 year period since pumping plant improvements (1999-2009).
5. Groundwater represents production from Mallard Wells, municipal customer owned wells, and miscellaneous other wells in the District's service area.
6. Anticipated water supply reliability benefit resulting from expansion of Los Vaqueros Reservoir.
7. Recycled water does not include wildlife habitat enhancement and wetlands or plant use.
8. Anticipated conservation savings, including both active and passive conservation.

Based on updates to the UWMP, the following paragraph supersedes the paragraph following Tables 3.4-1 through 3.4-5 in Section 3.4.3 of the SEIR:

CCWD's 2011 UWMP included an evaluation of water demand, conservation, and existing and potential sources of supplies including continued use of Central Valley Project (see Tables 3.4-1 through 3.4-5 above) water, groundwater, recycled water desalination, and water transfers. The supply and demand forecasts indicated that near-term demands can be met under all supply conditions, except in the latter years of a multi-year drought where short-term water purchases or voluntary short-term conservation of up to *nine (9) percent* (versus seven percent indicated in the SEIR) would be considered to meet demands. Future water demands will be achieved through implementation of the CCWD's Future Water Supply Study,⁵ which identifies alternative ways of meeting future water demand for the next 50 years.

3.4.2 Regulatory Framework

The following paragraph supersedes the paragraph under Section 3.4.4 *Regulatory Framework, State, Title 24, California's Energy Efficiency Standards for Residential and Non-Residential Buildings*. The standards are changed to reflect the current California Energy Commission Building Energy Efficiency Standards (established in 2008). Updated data is shown in italics.

Title 24, Part 6, of the California Code of Regulations establishes California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The standards were updated in 2008 and set a goal of reducing growth in electricity use by *561* gigawatt-hours per year (GWh/y) and growth in natural gas use by *19.0* million therms per year (therms/y). The savings attributable to new nonresidential buildings are *459* GWh/y of electricity savings and *11.5* million therms. For non-residential buildings, the standards establish minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., HVAC and water heating systems), indoor and outdoor lighting, and illuminated signs.

⁵ Contra Costa Water District. *Future Water Supply Study*. August 1996 (updated 2002).

3.4.3 Environmental Checklist and Discussion Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact than "Approved Project"	Checklist Source(s)
Would the project:						
1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-4,8
2. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-4,8
3. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-4
4. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-4,9
5. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-4,8
6. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-3
7. Comply with federal, state and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-3

3.4.3.1 Project Impacts and Mitigation Measures

Implementation of the Specific Plan, which is consistent with General Plan policies adopted for the purpose of reducing or avoiding impacts associated with public services and utilities, the CCWD's UWMP and Future Water Supply Study, California's energy efficiency standards, and local, state and federal regulations, would not result in a significant impact on public services or utilities. The following discussion supplements Section 3.4.7 of the SEIR. Impacts of public services and utilities in this Addendum are consistent with those of the SEIR.

Impacts on Water and Wastewater

Future development in the Concord Downtown PDA would increase the demand for water supply. CCWD's Future Water Supply Study Update (2002) and 2010 UWMP indicate that the City is on target with meeting the future demands of its service areas, while accounting for future growth throughout the area. Development in the Concord Downtown PDA is not anticipated to require any significant upgrades to water supply infrastructure.

Densification of the Downtown Concord PDA and changes in land use will likely increase sewage generation. The current Downtown Concord Sewer and Streetscape Improvements Phase II project (includes replacement of sewer mains and laterals), however, takes into consideration this increased density as projected by the General Plan. Although local lines may need to be upsized or extended to serve redeveloped parcels, no significant infrastructure deficiency mitigation is anticipated in order to serve the Downtown Concord PDA.

As stated in the SEIR, water demand with implementation of the General Plan, would not change substantially. Furthermore, the City's future water conservation measures may reduce future water demand. For these reasons, the proposed Specific Plan would not require water supply in excess of the demand assumed in the General Plan.

Impacts on Stormwater Drainage

The Downtown Concord PDA includes primarily developed parcels. Redevelopment of existing parcels would likely decrease stormwater runoff with the anticipated reduction in impervious area, additional greening, and compliance with regional and state stormwater requirements for water quality and quantity reductions. New development that increases stormwater runoff may be subject to Hydrograph Modification requirements to mitigate the additional flow if the increased runoff negatively impacts receiving stormwater facilities.

Local storm drainage infrastructure that collect and convey runoff to the major storm drain systems would likely be reconfigured to allow for redevelopment. New development may require that storm drainage infrastructure be extended to serve parcels if existing improvements are not currently available. Design would be in accordance with City of Concord design standards and specifications and would be coordinated with the City. No significant infrastructure impacts are anticipated in order to serve the Downtown Concord PDA.

State stormwater requirements require that new developments or re-developed areas more than 10,000 square feet (s.f.) maintain post-construction stormwater flows from the site at pre-construction levels; since the implementation of projects under the Specific Plan would comply with this requirement, no significant changes in stormwater flows are anticipated for the Downtown Concord PDA. Private and public projects would mitigate increased stormflows in effort to ensure that flows generated by the development are not increased. New developments would meet regional requirements for stormwater quality prior to being approved. Best Management Practices (BMPs) such as detention basins, bio-filtration basins, flow-through planters, and green roofs would also be implemented to mitigate stormwater runoff.

Solid Waste

Based on the Concord General Plan EIR, the City's solid waste capacity is sufficient to meet the needs of projected growth until 2030. With the implementation of General Plan policies established to reduce waste, solid waste impacts associated with the Specific Plan's new developments would not be significant. Projected population growth under the proposed General Plan is not anticipated to generate significant additional solid waste demand. Furthermore, the Concord Development Code includes development standards relating to solid waste, recycling, and green waste materials storage. Impacts of solid waste, associated with the Specific Plan's implementation, on solid waste landfills would be less than significant. New developments would be required to comply with General Plan policies, federal, state, and local solid waste regulations.

3.4.4 Conclusion

Development under the Specific Plan would cause sewage treatment plant servicing area to exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board. Wastewater flows associated with development assumed in the General Plan in the Downtown Concord PDA is accounted for in the City's projected wastewater flows.

(Less Than Significant Impact [Same as Approved Project])

Implementation of the Specific Plan would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of that could cause significant environmental effects. **(Less Than Significant Impact [Same as Approved Project])**

New development from the implementation of the Specific Plan would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of that could cause significant environmental effects.

(Less Than Significant Impact [Same as Approved Project])

With implementation of the City's UWMP and water conservation efforts, new development resulting from the implementation of the Specific Plan would have sufficient water supplies available to serve the Proposed Project from existing entitlements and resources, and would not require new or expanded entitlements. **(Less Than Significant Impact [Same as Approved Project])**

Projects under the Specific Plan would not result in an increase of capacity of the City's wastewater treatment system. The Central Contra Costa Sanitary District is anticipated to have the capacity to

serve developments under the General Plan and Specific Plan in addition to its existing commitments. **(Less Than Significant Impact [Same as Approved Project])**

New developments resulting from implementation of the Specific Plan would be served by a landfill with sufficient permitted capacity to accommodate the projects' solid waste disposal needs. **(Less Than Significant Impact [Same as Approved Project])**

Projects under the Specific Plan would comply with federal, state and local statutes and regulations related to solid waste. **(Less Than Significant Impact [Same as Approved Project])**

3.5 TRANSPORTATION/TRAFFIC

The Specific Plan proposes development that would allow for all modes of travel, with an emphasis on pedestrians, bicyclists, and transit users. Focusing new development in and around the BART station and Downtown core with a diversity of uses in proximity to BART, reduces the reliance on private motor vehicles, which helps minimize traffic congestion and the amount of land designated for parking.

The transportation and circulation goals and policies in the Specific Plan are consistent with the General Plan and Concord Development Code. The Specific Plan outlines transportation and circulation goals, policies and objectives planned for implementation and/or development in the Downtown Concord PDA. Transportation and circulation goals and objectives proposed for implementation of the Specific Plan's Downtown Concord PDA are to develop the following:

- A vehicular circulation system that accommodates both local traffic and through traffic with built-in flexibility to allow other modes of travel to take priority on specific streets as defined by this Specific Plan.
- An integrated pedestrian network of expansive sidewalks within the Downtown Concord PDA, with an emphasis on streets within the pedestrian priority zone.
- A bicycle network that builds upon existing plans and integrates more fully with the downtown and proposed public space improvements in the area.
- An integrated circulation plan that supports transit use.
- A public parking strategy and management plan that efficiently accommodates downtown visitors and supports downtown businesses.
- Flexible parking standards for private development based on current industry standards.

The following discussion is based on the *Transportation Assessment* (refer to Appendix A of this Initial Study) prepared by Fehr and Peers in January 2014 to confirm that implementation of the Specific Plan would not result in traffic impacts not previously identified in the SEIR.

3.5.1 Environmental Setting

The following section supplements *Section 3.5.3 Environmental Setting, Study Area, Traffic Operations and Analysis* of the SEIR. The section describes the City of Concord's benchmarks for Levels of Service (LOS) for signalized intersections and roadway segments, specifically for the Central Business District (CBD) in the City of Concord.

The Concord 2030 General Plan established a performance threshold for vehicle operations of LOS E for signalized intersections and roadway segments in the CBD. The CBD is generally defined as the area from Downtown Concord to I-680 including the area from Concord Avenue to Clayton Road. The Downtown Concord PDA is within the CBD. The LOS E benchmark is also applicable to the Downtown Concord BART Station vicinity and the City's transit routes, which are generally defined as roads with two or more bus transit lines.

The *Transportation Assessment* evaluated existing conditions and future conditions (implementation of the Specific Plan) of intersection and roadway segment levels of service. LOS based on the

implementation of the Specific Plan were compared to LOS based on the implementation of the General Plan and Concord Development Code to evaluate traffic impacts.

3.5.2 Regional Framework

3.5.2.1 *Applicable Plans and Policies*

Section 3.5.4 Regulatory Framework, Local, 2030 Concord General Plan of the SEIR outlines applicable General Plan policies related to traffic and circulation in the City of Concord. Traffic and circulation Specific Plan goals and policies are consistent with the General Plan. The following paragraphs outline Specific Plan goals and policies for Circulation, Vehicle Circulation, Pedestrian Circulation, Bicycle Circulation, Transit, Accessibility and Parking Strategy

Circulation

GOAL C-1: A system of complete streets that recognizes the modal priorities of each facility.

Policy C-1.1 (General Plan Policy T-1.1.5): Maintain transportation levels of service benchmarks which consider not only vehicle travel time and intersection delay, but also broader goals relating to environmental quality and community character. Lower levels of service may be acceptable in Downtown Concord, within one half mile of the City's two BART stations, along designated transit routes, and in other locations as deemed appropriate by the City Council.

Policy C-1.2: Adopt a street designation overlay for the Specific Plan Area.

Vehicle Circulation

GOAL C-2: Efficient but managed vehicle access in the Specific Plan Area.

Policy C-2.1: Continue to evaluate the effects of land use development on the overall circulation system through the preparation of focused transportation impact studies. Guidelines should be developed that identify the analysis procedures for evaluating all modes of travel.

Policy C-2.2: Eliminate the level of service benchmark for vehicles within the pedestrian priority zone.

Policy C-2.3: Update the City's Transportation Impact Fee to include non-motorized projects within the Specific Plan Area. These improvements would shift existing and future trips to non-auto modes, thereby freeing up capacity for new vehicle trips within the plan area.

Policy C-2.4: Evaluate potential improvements on Galindo Street between Salvio Street and Laguna Street to improve vehicle flow within the existing cross-section and facilitate pedestrian, bicycle and transit access.

Pedestrian Circulation

GOAL C-3: Quality pedestrian facilities and amenities that create a safe and aesthetically pleasing environment that encourages walking and accommodates increased pedestrian activity.

Policy C-3.1: To the extent feasible, eliminate existing and minimize future driveways and curbcuts within the pedestrian priority zone, specifically along Grant Street and Willow Pass Road. Sidewalks across driveways should be set back from the driveway so that they remain level.

Policy C-3.2: Widen sidewalks within the pedestrian priority zone and provide landscape buffers on connector and transit streets.

Policy C-3.3: Reduce street crossing widths and increase pedestrian visibility by installing curb extensions and crosswalk markings at intersections on key pedestrian streets where feasible.

Policy C-3.4: Provide pedestrian scale wayfinding throughout the Specific Plan Area.

Policy C-3.5: Provide pedestrian-scale street lighting along all streets in the Specific Plan Area, especially streets with commercial frontage.

Policy C-3.6: When traffic signals are upgraded, provide pedestrian countdown timers and audible devices.

Bicycle Circulation

GOAL C-4: A bicycle network with safe and efficient connections to major destinations within the Specific Plan Area and throughout the City of Concord and adjacent communities where feasible.

Policy C-4.1: Develop the bicycle network as depicted in the Specific Plan and further refined as part of the Bicycle Master Plan process.

Policy C-4.2: Enhance bicycle facilities at key intersections with high bicycle and automobile traffic. Potential changes may include facilities such as bicycle detection and extension of green times and bicycle boxes.

Policy C-4.3: Increase bicycle parking supply in the public realm.

Policy C-4.4: Explore the feasibility of providing a bike share program within the Specific Plan Area.

Transit

Policy C-5.1: Collaborate with Contra Costa Transportation Authority (CCTA) to improve bus service in the plan area and support Specific Plan objectives by incorporating the following recommendations into its Transit Performance Initiative.

Policy C-5.2: Evaluate and implement a free local circulator shuttle through the creation of a business improvement district.

Policy C-5.3: Coordinate enhancements for all modes of travel in the Plan Area with BART to provide seamless connections to and from the BART Station and the rest of the Specific Plan area.

Accessibility

The goals and policies identified within pedestrian, bicycle and transit sections would improve mobility within the study area for all users, including those with physical disabilities. Design of transportation and pedestrian infrastructure within the public right-of-way will meet requirements as set forth by the Americans with Disability Act (ADA).

Parking Strategy

GOAL C-7: A parking supply that supports Downtown businesses and stimulates economic growth, while not promoting excessive driving.

Policy C-7.1: To the extent feasible, encourage private entities to allow public parking after typical business hours for shared parking use within each development and between different developments.

Policy C-7.2: Develop a parking management plan that includes a wayfinding component to encourage a “park once” strategy and a special event parking management strategy.

Policy C-7.3: Adjust parking requirements for developments within the Specific Plan Area.

Policy C-7.4: Evaluate the potential to provide more flexible parking standards to provide flexibility to developers as minimum parking requirements can reduce the feasibility of in-fill developments on small lots, including a requirement to unbundle parking from the purchase price of residential units.

Policy C-7.5: Encourage car sharing to occur throughout the plan area through partnership with zipcar or other car sharing entity.

3.5.3 Environmental Checklist and Discussion of Impacts

	New Potentially Significant Impact	New Less Than Significant With Mitigation Incorporated	New Less Than Significant Impact	Same Impact as "Approved Project"	Less Impact Than "Approved Project"	Checklist Source(s)
Would the project:						
1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,4,10
2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,4,10
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,3
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,3,4
5. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,3,4
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1,2,4,10

3.5.3.1 *Transportation/Traffic Impacts*

The following assessment of traffic impacts compares the results of the SEIR to those of the *Transportation Assessment* prepared for the Specific Plan. The *Transportation Assessment* utilized updated traffic information, including traffic counts reflective of 2013 conditions, the most current regional modeling tools, and intersection LOS analysis tools that take into account pedestrian and bicycle activity, as well as intersection signal timings. Overall, the updated *Transportation Assessment* has similar conclusions as the General Plan transportation analysis since the Specific Plan would generate essentially the same amount of development (consistent with the Concord Development Code) in the Downtown Concord PDA that is projected in the General Plan.

Impacts Applicable Plans, Policies, or Ordinances

Trip Generation

Implementation of the Specific Plan and the General Plan would increase vehicle traffic that leaves the Downtown Concord PDA by approximately 9,560 trips on a daily basis, including 1,100 morning and 1,370 evening peak hour trips. Adoption of Specific Plan transportation policies that encourage vehicle trip reduction may reduce anticipated vehicle trips assumed in the General Plan. A local circulator shuttle connecting the BART station to various destinations within the Downtown Concord PDA, including transit stop enhancements, would also be further evaluated for its feasibility to encourage greater transit usage throughout the Downtown Concord PDA. Changes in trip generation were taken into account for the preparation of the *Transportation Assessment*.

Freeway Impacts

As described in the SEIR, the General Plan would contribute to impaired freeway operations, which would remain at a substandard level of services (i.e., F). No feasible mitigation measures have been identified that would reduce freeway impacts to a less than significant level. Increasing freeway capacity by adding lanes is currently under review by CCTA (Contra Costa County's Congestion Management Agency) and California Department of Transportation (Caltrans). Because the Specific Plan allows essentially the same amount of development within the Downtown Concord PDA as the General Plan, no new significant impacts on freeway traffic would result from the implementation of the Specific Plan.

Roadway Impacts

The SEIR and the *Transportation Assessment* prepared for the Specific Plan analyzed roadway segments within the Downtown area. The *Transportation Assessment* was completed with more up to date information; therefore, it has been confirmed that major roadways within the Downtown area would operate within the levels of service identified in the SEIR with Specific Plan implementation.

As stated in the SEIR, several roadway segments could improve with implementation of improvements included in the General Plan. For these reasons, and because additional development is not proposed, roadways within the Downtown Concord PDA would operate at similar unacceptable levels and significant unavoidable impacts identified in the SEIR would still occur.

Vehicle Miles Traveled

Based on the *Transportation Assessment*, vehicle miles traveled (VMT) are expected to increase as the City continues to grow. The level of VMT growth, however, is within the range predicted within the SEIR and the Citywide CAP. Therefore, no new significant impacts would result from the increase of VMT resulting from Specific Plan implementation.

Intersection Levels of Service

Similar to roadway segments, the *Transportation Assessment* was completed to determine if impacts associated with the development envisioned in the Specific Plan would be greater than impacts of General Plan and Concord Development Code Project development. Two intersections were evaluated in the *Transportation Assessment* that were also evaluated in the SEIR (based on development assumed in the General Plan and Concord Development Project). More up to date information was used in the *Transportation Assessment* for the existing and future levels of service at the intersections. For these intersections, impacts associated with Specific Plan implementation would be consistent with the City's LOS E benchmark.

Other intersection LOS impacts were identified in the SEIR that are assumed to continue to be significant and unavoidable. As stated in the SEIR, widening impacted intersections would require acquisition of property and the displacement of businesses and/or residents. Two mitigation measures were identified to reduce potential impacts; however, impacts would not be reduced to a less than significant level. This conclusion is consistent with the conclusions of the SEIR.

Transit System

Transit services in Downtown Concord include BART trains and County Connection buses. Implementation of the Specific Plan has the potential to further increase transit system ridership in the Downtown Concord PDA; however, the increase in ridership is already assumed in the General Plan. The Specific Plan, therefore, would not result in a new significant impact on the City's transit system.

3.5.4 Conclusion

The General Plan and Specific Plan propose several goals intended to encourage an efficient land use pattern, manage future traffic congestion, and reduce commute trips and length. Consistent with the SEIR analysis, however, implementation of the Specific Plan would contribute to freeway congestion and would conflict with the City's LOS benchmarks establishing measures of effectiveness for the performance of the circulation system, specifically roadways and intersections. Impacts on roadways and intersections are considered significant and unavoidable since planned mitigation measures for physical improvements do not currently exist that would reduce these impacts to a less than significant level. **(Significant and Unavoidable Impact [Same as Approved Project])**

Implementation of the Specific Plan would not conflict with the standards established by the CCTA, including level of service standards, travel demand measures or other standards established by the CCTA. **(Less Than Significant Impact [Same as Approved Project])**

Implementation of the Specific Plan would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

(No Impact [Same as Approved Project])

The Specific Plan's implementation would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses. Projects implemented under the Specific Plan would comply with the City's project design standards and Development Code (that address traffic hazards). **(Less Than Significant Impact [Same as Approved Project])**

Implementation of the Specific Plan would not result in inadequate emergency access. Projects under the Specific Plan would comply with the City's zoning requirements and project design standards intended to address emergency access. The City of Concord Police Department and Contra Costa County Fire Protection District would review individual development proposals to ensure that access needs are met. **(Less Than Significant Impact [Same as Approved Project])**

Implementation of the Specific Plan would be consistent with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. **(No Impact [Same as Approved Project])**

SECTION 4.0 CONCLUSION

Based on the above analysis and discussion, no substantive revisions to the SEIR are needed because no new significant impacts or impacts of substantially greater severity would result from the approved Specific Plan. There have been no changes in circumstances in the Downtown Concord Priority Development Area that would result in new significant environmental impacts or substantially more severe impacts and no new information has come to light that would indicate the potential for new significant impacts or substantially more severe impacts than were discussed in the SEIR. For these reasons, no further evaluation is required, and no Subsequent EIR is needed pursuant to State CEQA Guidelines Section 15162, and an SEIR Addendum has therefore appropriately been prepared, pursuant to Section 15164.

Pursuant to CEQA Guidelines §15164(c), this Addendum will be included in the public record file for the *Supplemental Environmental Impact Report to the 2030 Concord General Plan EIR for the Concord Development Code Project*.

The *draft Downtown Concord Specific Plan* is available for public review at the City of Concord Permit Center, located at 1950 Parkside Drive, Building D, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday excluding holidays. The document may also be accessed on the City's website during the public comment period at <http://www.cityofconcord.org/downtownplan/> under "Project Documents". While circulation of the *Addendum to the Final Supplemental Environmental Impact Report (SEIR) to the 2030 Concord General Plan EIR for the Concord Development Code Project* (Addendum) is not required, in the interest of transparency, *the Addendum, the SEIR, and the Final Environmental Impact Report for the Concord 2030 Urban Area General Plan (General Plan EIR)*, are available for public inspection as of January 28, 2014 at the City of Concord Permit Center, located at 1950 Parkside Drive, Building D, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday excluding holidays. The document may also be accessed on the City's website during the public comment period at <http://www.cityofconcord.org/city.gov/dept/planning/eir.htm>.

By:

Victoria Walker, Director
Community and Economic Development Department
City of Concord

Signature

Date

SECTION 5.0 CHECKLIST SOURCES

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SECTION 7.0 AUTHORS AND CONSULTANTS

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Appendix A
Transportation Assessment



MEMORANDUM

Date: January 22, 2014
To: Dennis Dornan, Perkins + Will
From: Kathrin Tellez and Kristen Carnarius, Fehr and Peers
Subject: **Downtown Concord Specific Plan – Transportation Assessment**

WC13-3010

Fehr & Peers evaluated transportation conditions in Downtown Concord as part of the Downtown Specific Plan (DSP) project. The Specific Plan refines the vision set for Downtown Concord within the General Plan and provides guidance for future development to achieve goals set forth in the Specific Plan, including expanding transportation options, providing a variety of housing types, and increasing employment opportunities. The boundary of the DSP area is shown on **Figure 1**.

This assessment expands on the Transportation and Circulation chapter of the Downtown Concord Specific Plan Existing Conditions report dated March 28, 2013, and the Draft Specific Plan document dated September 17, 2013. No specific development projects would occur as a result of the adoption of the DSP; future developments, when proposed, would be subject to City review and approval. The purpose of this assessment is to compare the level of development contemplated within the DSP to the General Plan, and evaluate the existing and future transportation system with development levels contemplated within the Specific Plan in conjunction with transportation system enhancements proposed within the DSP area.

INTRODUCTION AND PROJECT DESCRIPTION

Although no development is currently proposed to occur as part of the Specific Plan, it is envisioned that based on the zoning allowed under the General Plan, approximately 4,000 new dwelling units, and approximately 1,500,000 square feet of office uses could be constructed in the downtown area. It is anticipated that there would be a net-decrease in retail square footage as some parcels are redeveloped.



Potential changes to the transportation system are also contemplated as part of this plan, including provision of buffered bicycle lanes on Clayton Road and Concord Boulevard, restriping of Concord Avenue/Galindo Boulevard to reallocate the right-of-way and potentially add bicycle lanes to a portion of the roadway, modifying traffic signal cycle lengths to decrease pedestrian delay, installing pedestrian signals across major arterials, and prioritizing pedestrian travel through certain zones of the downtown area.

The following describes the existing conditions within the Downtown Specific Plan area, discusses the transportation characteristics of the proposed Specific Plan, and then presents an assessment of existing and future conditions with transportation system changes envisioned as part of the Specific Plan.

EXISTING CONDITIONS

The following provides information related to the existing transportation conditions in the DSP area based on the Transportation and Circulation chapter of the Existing Conditions report dated March 28, 2013.

Figure 2 illustrates the roadway system based on the roadway designations identified in the Concord 2030 General Plan (adopted 10/2/07; last amended 7/10/12). Three freeways provide regional access to the SPA: Interstate 680 (I-680), State Route 242 (SR 242) and State Route 4. I-680 is approximately 1.5 miles to the west and SR 4 is approximately 2 miles to the north of the SPA. SR 242 forms the western boundary of the Plan area. Concord's roadway system connects with Pittsburg to the northeast, Martinez and Pleasant Hill to the west, Walnut Creek to the south, and Clayton to the east.

The Concord 2030 General Plan sets its general performance target for vehicle operations at Level of Service¹ (LOS) D. In the Central Business District (CBD), the threshold is LOS E, recognizing the more urban, pedestrian-oriented character of this area and the trade-offs between a high level of vehicle mobility and other modes of travel. The CBD is generally defined as the area from the Downtown to I-680 including the area from Concord Avenue to Clayton Road. The LOS E benchmark also applies in the vicinity of Downtown BART Station, and along the City's transit

¹ The operations of roadway facilities are typically described with the term "level of service" (LOS). LOS is a qualitative description of traffic flow from a vehicle driver's perspective based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels of service are defined ranging from LOS A (best operating conditions) to LOS F (worst operating conditions). Typically, LOS E corresponds to operations "at capacity." When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F.



routes, which are generally defined as roads with two or more bus transit lines. Through the Specific Plan Area, these roads include Concord Avenue and Clayton Road.

Routes of Regional Significance are major roadway and freeway corridors serving regional traffic, as identified in Action Plans adopted by the Contra Costa Transportation Authority (CCTA) as part of the countywide Measure J program. Key routes providing regional access to the Plan Area include I-680, SR 242, SR-4, Ygnacio Valley Road / Kirker Pass Road, Treat Boulevard, and Clayton Road between Treat Boulevard and Kirker Pass Road.

Arterials deliver traffic between the freeways, collector streets, and other major streets between Concord and neighboring jurisdictions. Key arterials in SPA include East Street, Clayton Road, Concord Boulevard, Port Chicago Highway, Concord Avenue, Galindo Street, Monument Boulevard and Willow Pass Road.

Collectors link arterials to neighborhood or local streets. Key collectors in the vicinity of the Plan Area are Grant Street, Mt Diablo Street, Colfax Street, Salvio Street, Pacheco Street, and Bonifacio Street.

Local Streets provide direct access to adjacent properties. Key local streets connecting the BART area to downtown Concord are Park Street, Oak Street, Oakland Street, and Laguna Street.

Transit network

The DSP area is served by both commuter rail and bus service, as shown on **Figure 3**. The area within a half-mile perimeter of the BART station is located within a Transit Overlay District. Development standards in this area are intended to provide a concentrated mixture of residential and commercial uses in a pedestrian environment well served by BART. Specific uses that tend to be auto-dominated are prohibited and off-street parking requirements are less than for similar projects not served by BART.

The Concord BART station is located roughly one-third of a mile south of the Todos Santos Plaza, and sits on a triangular parcel. The station is served by the Pittsburg/Bay Point line, providing direct service to the San Francisco International Airport (SFO) via downtown San Francisco, with train frequency from 20 minutes on weekends, 15 minutes on off-peak weekday, to five to eight minutes during the peak commute hours.

The CCCTA (the 'County Connection') provides bus service throughout Central Contra Costa County. Weekday fixed route service includes 24 routes and seven express routes, and ten



weekend routes. Paratransit service is also provided. Fixed route service is generally provided from 6:00 AM to 9:00 PM on weekdays, and from 9:00 AM to 7:00 PM on weekends.

Eleven lines serve the City of Concord, ten of which converge on the Concord BART station. These routes provide local service (including school routes), BART feeder service, and regional connectivity linking Concord to adjacent communities. Through the SPA, the routes operate primarily along Galindo Street/Concord Avenue, Grant Street, East Street, and Port Chicago Highway. Buses enter the dedicated terminal area at the BART station via an entrance on Mt. Diablo Street at Laguna Street and exit onto Park Street.

The Concord BART Station is also the terminus for Tri-Delta transit Route 201, which connects Pittsburg/Bay Point BART station to the Concord BART station, and operates with 30 minute headways during the morning and evening peak periods. There are only two stops in Concord, one at East Street at Bacon Street, and another at the Concord BART Station.

Bicycle Access and Circulation

Given the topography and climate of Concord, bicycling is a viable alternative to the single occupancy vehicle for both recreational and non-recreational trips. The *Concord 2030 General Plan* identifies the following bicycle facility types:

- **Class 1 Bicycle Trails** are similar to Caltrans Class I bike paths, offering paved trails that are separated from roadways except at crossings, and may serve multiple users including bicyclists and pedestrians.
- **Class 3B Bike Routes** consist of signed routes with edge lines along collector and arterial streets. Edge lines demark a variable width from 3 to 4 feet for bicycle travel, which is less than the minimum bicycle lane width of 5 feet required to qualify for a Caltrans Class II bike lane designation.
- **Class 3A Bike Facilities** are similar to Caltrans Class III bike routes, consisting of signed routes on residential streets where motor vehicles are expected to share the road with bicyclists; dedicated lanes are not provided

Limited on-street bicycle facilities exist through the downtown area, requiring bicyclists to travel circuitous routes to the downtown area from the BART station, use unsigned routes, or ride on the sidewalks or in travel lanes. The primary route between the Concord BART station and the downtown area is a Class 3A facility along East Street, between Gil Drive and Concord Blvd, which connects with another Class 3A facility along Bonifacio Street, two blocks north of Todos



Santos Plaza. **Figure 4** illustrates the existing bicycle network and public bicycle parking through the downtown area. Although potential bicycle network enhancements have been proposed as part of the DSP, the City plans to develop a Citywide Bicycle and Pedestrian Master Plan starting in Spring 2014 that will plan for new bicycle facilities on a Citywide basis that will provide connections to the downtown area.

In the downtown area, the City of Concord provides bike racks with space for 86 bikes on the ground floor of the Salvio Street Garage, and 6 spaces via two inverted-u racks at Todos Santos Plaza, along Mt. Diablo Street. Providing additional bicycle parking in the downtown area is a goal of the plan.

Pedestrian Network

The Concord BART Station is a primary pedestrian destination from the Downtown area and surrounding neighborhoods. However, large surface parking lots, multi-lane one-way streets, fast-moving arterial traffic, and discontinuous pedestrian facilities serve as pedestrian barriers. Additionally, narrow sidewalks and long traffic signal cycles can impede pedestrian travel through the downtown area and across major arterials such as Clayton Road and Concord Boulevard. Enhanced wayfinding, decreased pedestrian crossing distances, wider sidewalks, and reduced traffic signal cycles are included as goals and policies within the Downtown Specific Plan.

Parking

Generally, there is a parking surplus throughout the downtown area on typical weekdays. On-street parking is generally available within the core downtown area, although occupancies increase with proximity to Todos Santos Plaza. Off-street parking is available in two public garages. There are numerous private parking lots through the SPA which are not discussed below.

There are 2,335 parking spaces available at Downtown Concord Station with reserved, carpool, long-term, and daily parking. BART parking lots at Concord Station are generally full by 8:00 AM on weekdays. To discourage commuter parking in residential neighborhoods, on-street parking in the residential areas surrounding the BART station is restricted to 4 hours between the hours of 7 AM to 6 PM, Monday through Friday. Vehicles displaying a residential permit are exempt from these restrictions.



The 2012 *Todos Santos Plaza Parking Study* concluded that installing meters or charging for parking was not needed based on current conditions as a parking management tool (i.e. to improve parking turnover or reduce illegal overtime parking) because current parking demand is generally met by current on- and off-street supply. During special events at Todos Santos Plaza, such as summer concerts, it can be difficult to find an available parking space in close proximity to the Plaza, but these periodic difficulties in finding parking demonstrate the popularity of events in Downtown Concord.

All new development would be subject to parking requirements in place at the time of project approvals. The Specific Plan identifies parking requirement reductions for developments within a half-mile of the BART station that could be incorporated into City Code requirements.

Existing Traffic Volumes and Lane Configurations

Based on consultation with City staff and the locations of expected roadway network changes, the following intersections and roadway segments were selected to be evaluated as part of this assessment:

Intersections

1. Concord Avenue / Pacheco Street
2. Galindo Street / Willow Pass Road
3. Galindo Street / Concord Boulevard
4. Galindo Street / Clayton Road
5. Galindo Street/ Laguna Street / Oak Street
6. Fry Way / Clayton Road
7. Oakland Avenue / Clayton Road
8. Galindo Street / Laguna Street

Roadway Segments

1. Clayton Road west of Grant Street
2. Concord Boulevard west of Grant Street
3. Willow Pass Road west of Grant Street

Weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak period intersection turning movement counts were conducted at the study intersections, including counts of pedestrians and bicyclists. 72-hour counts were conducted for weekday conditions on the roadway segments noted above. Counts were conducted on clear days in May 2013 with area schools in session. Counts collected during the school year are representative of typical traffic conditions for the majority of the year, with lower traffic volumes typically experienced on non-school days. For the study intersections, the single hour with the highest traffic volumes during



the count periods was identified. The AM peak hour in the study area is generally from 7:30 to 8:30 AM and the PM peak hour is generally from 5:00 to 6:00 PM.

The existing volumes are presented on **Figure 5** along with the existing lane configuration and traffic control. The traffic count sheets are attached. Existing traffic signal timings were provided by the City of Concord. Field reconnaissance was also performed to verify lane configurations, turn pocket lengths, speed limits, and signal timing and phasing and to observe general roadway operations. Recent 2013 traffic counts were compared to intersection count data collected in 2004. The comparison of traffic counts along the Galindo Street corridor indicates that overall, traffic volumes in the area have increased by approximately 4 percent during the morning peak hour and decreased by approximately 1 percent during the evening peak hour. These changes are within the expected range of daily variation as traffic flows can differ throughout the week, and overall traffic conditions based on the volume comparison are relatively unchanged despite development that has occurred since 2004, such as the Fry's Electronics store, and construction of approximately 450 residential units within the downtown area.

Intersection Operations

The operations of roadway facilities are described with the term "level of service" (LOS) in this study. **Attachment A** describes the LOS analysis methods. The City of Concord strives to maintain Level of Service E for vehicle operations, recognizing that a higher service level for vehicles could degrade travel through the downtown area for other modes of travel. The analysis results presented in this technical memorandum are based on the 2010 *Highway Capacity Manual* (HCM) method, as adopted by the Contra Costa Transportation Authority (CCTA) for use in evaluating intersection operations in March of 2013. The HCM analysis method considers intersection signal timing parameters, in addition to pedestrian and bicycle travel through the intersection, while the analysis results presented in the *General Plan Supplemental Environmental Impact Report* (SEIR) are based on volume-to-capacity ratios using the CCTA LOS method, which was the adopted analysis methodology at the time the SEIR analysis was completed.

Existing operations were evaluated using the method described above for the weekday AM and PM peak hours at the study intersections, as summarized in **Table 1**. The analysis was based on the volumes, lane configurations and traffic control shown on Figure 5. Observed peak hour



factors² were used at all intersections for the existing analysis. Pedestrian and bicycle activity was factored into the analysis.

**TABLE 1
 EXISTING INTERSECTION PEAK HOUR LEVELS OF SERVICE**

Location	Control ¹	Peak Hour	HCM2010 Method	
			Delay ²	LOS
1. Concord Avenue / Pacheco Street	Signal	AM	5	A
		PM	9	A
2. Galindo Street / Willow Pass Road ³	Signal	AM	28	C
		PM	31	C
3. Galindo Street / Concord Boulevard ³	Signal	AM	21	C
		PM	18	B
4. Galindo Street / Clayton Road ³	Signal	AM	20	B
		PM	29	C
5. Galindo Street / Laguna Street / Oak Street	Signal	AM	16	B
		PM	13	B
6. Fry Way / Clayton Road	Signal	AM	9	A
		PM	12	B
7. Oakland Avenue / Clayton Road	Signal	AM	28	C
		PM	27	C
8. Galindo Street / Laguna Street	SSSC	AM	0 (15)	A (B)
		PM	0 (15)	A (B)

Notes:

1. Signal = Signalized intersection, SSSC = side street stop controlled intersection
2. Signalized intersection level of service based on average intersection control delay (in seconds) according to the *Highway Capacity Manual* (Transportation Research Board, 2010). For side-street stop-controlled intersections, delay is reported as intersection average (worst case approach).
3. Periodic spillback of vehicle queues between intersections 2 through 4 can affect vehicle progression on Galindo Street and can result in worse service levels than presented here. MicroSimulation would be needed to fully quantify the effects of vehicle queue spillback on intersection operations.

Source: Fehr & Peers, 2013.

As shown, study intersections generally operate at acceptable service levels. Although the intersections along Galindo Street operate at acceptable service levels, vehicle queue spillback

² The relationship between the peak 15-minute flow rate and the full hourly volume is given by the peak-hour factor (PHF) as shown in the following equation: $PHF = \text{Hourly volume} / (4 * \text{volume during the peak 15 minutes of flow})$. The analysis of level of service is based on peak rates of flow occurring within the peak hour because substantial short-term fluctuations typically occur during an hour.



between intersections can affect operations along the corridor and degrade operations to worse service levels than presented in this memorandum. The City of Concord regularly monitors signal timings through the SPA, and the City as a whole, and makes adjustments to optimize performance of the transportation system.

As described previously, roadway segment counts were conducted over a 3-three day period. Average daily traffic volumes on the study roadways is summarized in **Table 2** and previously on Figure 5, along with the associated level of service based on the daily volume. The three roadway segments operate at an overall level of service D. Average peak hour traffic volumes on these roadways are also summarized in Table 2. The daily traffic volumes based on recent data was compared to data from 2008. Combined volumes have increased on the three roadway segments included in this assessment by approximately 3 percent, with volumes on Willow Pass Road and Clayton Road decreasing and volumes on Concord Boulevard increasing.

Daily and peak hour variation between the three data collection days was calculated to determine how traffic flows might vary through the study area. Based on the three days of data collection, traffic volumes through the study area vary by approximately 1 to 2 percent on a daily basis. On a peak hour basis, traffic volumes are more variable and are dependent on a number of other factors, such as congestion on the regional roadway system that could delay a vehicles arrival to the study area.



**TABLE 2
 EXISTING WEEKDAY TRAFFIC VOLUMES**

Roadway	Daily			AM Peak Hour		PM Peak Hour	
	Average Traffic ¹	Level of Service	Daily Variation ²	Average Traffic ³	Variation ²	Average Volume ⁴	Variation ²
1. Clayton Rd west of Grant St	15,400	D	1.8%	420	2.3%	280	3.5%
2. Concord Blvd west of Grant St	17,200	D	1.0%	290	4.2%	500	0.5%
3. Willow Pass Rd west of Grant St	20,700	D	1.8%	370	2.7%	440	1.7%

Notes:

1. Average daily traffic measured over three weekdays.
2. Standard deviation (as a percent of the average) of the three days of data collection.
3. Average morning peak hour volume from the three weekdays of data collection.
4. Average evening peak hour volume from the three weekdays of data collection

Source: Fehr & Peers, 2013.

PROJECT TRANSPORTATION CHARACTERISTICS

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the surrounding roadway system. Estimates are created on a daily basis and for the peak one-hour period during the morning and evening commute periods when traffic volumes on the adjacent streets are highest. Although no specific development is proposed within the Specific Plan area at this time, the purpose of the trip generation assessment below is to provide information about the potential trip generating characteristics of land use development in the downtown area with the Specific Plan, which is consistent with the General Plan.

Traditional analysis methods commonly used by traffic engineers to quantify the vehicle trip making characteristics of development can overestimate vehicle trip generation of mixed-use development, such as would be experienced in Downtown Concord. This is due to an inability of traditional tools to accurately reflect the amount of internal trip linking or the level of trips made by transit, biking, and/or walking within and to a mixed-use site. This can result in increased development costs due to oversized infrastructure, and skewed public perception of the likely impacts of mixed-use development. The most common method used is outlined in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (9th Edition). This method contains data primarily collected at suburban, single-use, freestanding sites. This limits their applicability to mixed-use development, such as a downtown area. This method does not adequately account for



key variables that influence travel such as development density and scale, location efficiency, land use mix, urban design and transit orientation.

Two significant new research studies provide the opportunity to improve the state of practice. One study sponsored by the US EPA³ and another by the Transportation Research Board⁴ have developed means to improve trip generation estimation for mixed-use development (MXD). The two studies examined over 260 mixed-use development sites throughout the U.S. and, using different approaches, developed new quantification methods. Fehr & Peers has reviewed the two methods, including the basis, capabilities, and appropriate uses of each, to produce a new method (MXD+) that combines the strengths of the two individual methods. MXD+ recognizes that traffic generation by mixed-use and other forms of sustainable development relate closely to the density, diversity, design, destination accessibility, transit proximity, and scale of development. MXD+ improves the accuracy of impact estimation and gives planners a tool to rationally balance land use mix and to incorporate urban design, context compatibility, and transit orientation to create lower-impact development.

The MXD+ methodology starts with ITE trip generation estimates but then adjusts those estimates to account for the mixed-use and environment characteristics. Use of the MXD+ methodology requires more input data than a traditional trip generation application. Data detailing the geographic layout of the site, land use in the surrounding area, and socioeconomic data of both the site and the surrounding area were collected to inform the MXD+ methodology. Model inputs, in addition to land use information, include the number of jobs within a 30 minute transit ride of the DSP area, the expected level of auto-ownership, and average household size. Sources used to collect this data include the Contra Costa Transportation Authority (CCTA) travel demand model, the Metropolitan Transportation Commission (MTC) travel demand model, Census and American Community Survey (ACS), the Bay Area Travel Survey (BATS), and the Specific Plan Options. Detailed information about the variables included in the tool specific to this site are provided in **Attachment B**. Additional information including recent certified EIRs that have used this approach is also included in the attachment.

Table 3 shows the potential level of development that could occur under the DSP. This level of development was compared to the assumptions within the City's General Plan as well as land use growth contained within the Contra Costa County Travel Demand Model (CCTA Model). Based on

³ *Traffic Generated by Mixed-Use Developments—A Six-Region Study Using Consistent Built Environmental Measures* (Ewing et al, ASCE UP0146, Sept 2011)

⁴ National Cooperative Highway Research Program (NCHRP) Report 684 *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments* (Bochner et al, March 2011)



this review, the level of development contemplated to occur in the DSP area is consistent with the General Plan and the level of development assumed in the regional model.

**TABLE 3
 POTENTIAL GROWTH IN DOWNTOWN SPECIFIC PLAN AREA**

Land Use Type	Units ¹	Existing	Project	Change
<i>Residential</i>				
Single Family	DU	1,360	1,354	(6)
Multi-Family	DU	2,890	6,388	3,498
Townhome	DU	--	518	518
<i>Employment/Service</i>				
General Office	ksf	2,300	3,868	1,568
Manufacturing	ksf	170	170	--
Warehouse	ksf	369	369	--
General Retail	ksf	1,500	1,210	(290)
Movie Theater	Screens	14	14	--

Notes:

1. DU = dwelling units; ksf = 1,000 square feet
 Source: Perkins & Will and Fehr & Peers, 2013

Although no development is currently proposed for implementation with the DSP and future development would be subject to City review at the time a development application is filed, the potential level of trip generation with development consistent with the vision of the DSP was calculated based on the method described above as presented in **Table 4**. Estimates were calculated for the existing and future condition for all modes of travel within the DSP area.



**TABLE 4
 PROJECT TRIP GENERATION**

Trip Category	Existing			Project		
	Daily	AM	PM	Daily	AM	PM
ITE External Vehicle Trip Generation Estimate	194,390	15,390	17,810	219,460	18,380	21,080
Trip Reductions						
Internal Capture (All modes)	-38,310	-2,500	-6,520	-46,190	-3,400	-7,550
External Walk/Bike Trips	-13,240	-1,660	-1,060	-17,860	-2,260	-1,490
External Bus Trips	-5,530	-690	-670	-7,040	-920	-930
External BART Trips	-10,670	-1,220	-1,380	-12,170	-1,380	-1,560
Net External Vehicle Trips	126,640	9,320	8,180	136,200	10,420	9,550
Net Change with DSP				9,560	1,100	1,370

Source: Fehr & Peers, January 2014

External vehicle trips represent trips that would interact with roadway facilities outside the Project area. Internal capture represents trips that have both an origin and destination within DSP area, including residents that shop or work within the downtown area, in addition to an office worker that may come from outside the DSP area for one trip, but patronize local establishments such as a restaurant during lunch hour. These trips could be via an automobile or walk/bike trips. External transit, walk, and bike trips represent those trips that visit or leave the site via modes other than automobile.

As shown in Table 4, after considering the interaction of the various land uses with each other and the variety of travel modes, development consistent with the DSP and the General Plan could increase vehicle traffic that leaves the downtown area by approximately 9,560 trips on a daily basis, including 1,100 morning and 1,370 evening peak hour trips.

FUTURE TRAFFIC CONDITIONS

As discussed previously, land use development assumptions presented in the DSP are consistent with the General Plan and the CCTA model. To assess future traffic conditions within the Downtown area, traffic growth projections from the CCTA model were reviewed. The forecasts



reflect conditions with growth projections as contemplated in the Concord's General Plan and Downtown Specific Plan, and include regional growth, such as from development of the Naval Weapons Station and from adjacent communities.

Traffic volumes entering the DSP area are expected to increase by approximately 30 percent on a daily basis, 30 percent during the morning peak period and 20 percent during the evening peak period. To assess future traffic conditions, the daily and peak hour traffic volumes were increased by the percentages noted above, as presented on **Figure 6**.

Intersection and roadways segment operations were evaluated based on the methods described previously and the results are shown in **Table 8** for intersections and **Table 9** for roadway segments. With the projected levels of traffic growth, delay would increase at intersections in the DSP area. However, intersections and roadway segments would continue to operate within service level standards set by the City of Concord for the downtown area.

ANALYSIS OF SPECIFIC PLAN CONDITIONS

The Specific Plan generally retains the existing vehicular circulation system and travel patterns, with some modifications to better accommodate pedestrian and bicycle movement. Conversions of some one-way streets to two way streets were considered for Pacheco Street between Concord Avenue and Mt. Diablo Street, and on Harrison Street between Broadway Street and Concord Avenue. An assessment of this conversion was conducted and is provided as **Attachment C**; the analysis results indicated that conversion from one-way to two-way travel would not result in significantly worsened travel through the corridor for vehicles and would enhance bicycle and pedestrian accessibility within the area. However, given the extensive intersection reconstruction that would be required to avoid worsening conditions for pedestrians, these changes might be better considered as a long-term improvement to be implemented with other land use and network changes in the area.

Road diets are proposed for several roadways within the SPA, including Clayton Road, Concord Boulevard, and Willow Pass Road. Road diets entail taking away a travel lane from vehicles and allocating the right-of-way to other roadway users, such as providing bicycle lanes, widening sidewalks, providing transit only lanes, or other enhancements to better accommodate different modes of travel within the available right-of-way. Based on the traffic volumes on Clayton Road and Concord Boulevard, there is sufficient capacity to accommodate removal of a travel lane (from 5 lanes to 4 lanes) to provide bicycle facilities, and accommodate future growth (see analysis below).



On Willow Pass Road, a road diet was identified as a potential measure at several community meetings. Road diets on four-lane roadways are ideal for roadways carrying upwards of 15,000 to 20,000 vehicles per day. On roadways with average daily traffic volumes between 20,000 and 25,000 there is a greater likelihood that traffic would divert to alternate routes. Based on the level of daily traffic on Willow Pass Road, a road diet would likely result in traffic diverting to parallel roadways, including Clayton Road and Concord Boulevard.

With a road diet, Willow Pass Road would have limited ability to accommodate traffic growth, whether from the SPA or regional growth. Benefits of the road diet would be the ability to provide bike lanes or on-street parking, decreased pedestrian crossing distances across Willow Pass Road, potential for decreased vehicle speeds, and the potential for increased sidewalk width. Preliminary analysis of peak hour operations at the Galindo Street/Willow Pass Road intersection indicates that eliminating a through travel lane on Willow Pass Road at Galindo Street would significantly worsen operations for vehicles and would worsen queue spillback and congestion along the Galindo Street corridor during peak hours. Although no off-peak assessment was conducted, it is expected that off-peak operations would likely remain about the same for vehicles. Benefits for other travel modes would be experienced at all times of day.

This preliminary assessment was conducted based on traffic volumes remaining the same with a road diet; however, a reduction in capacity would likely lead to traffic diverting to parallel streets and some through traffic remaining on the regional transportation facilities, such as SR 242 and SR 4. Further analysis, including an origin/destination study for vehicles currently using the roadway and a more expansive assessment of intersection operations within the area would be needed to assess operations with a road diet.

Specific modifications to vehicle circulation within the Specific Plan Area were evaluated:

1. Eliminate one vehicle travel lane on Clayton Road and Concord Boulevard between Sutter Street and Grant Street to provide buffered bike lanes.
2. Improvements on Galindo Street between Salvio Street and Laguna Street to improve vehicle flow within the existing cross-section.
3. Modifications to the Willow Pass Road at Galindo Street intersection to provide protected left-turn phasing to reduce vehicle conflicts with pedestrians



4. Reduce traffic signal cycle lengths throughout the downtown area, and with a primary focus on intersections within the pedestrian priority zone as described in the Specific Plan.

As modifications have independent utility, intersection operations were evaluated for separately for lane changes and signal timing changes, and then combined for both existing and future conditions, as described below.

- **Lane Geometry Changes** – Conditions with lane geometry changes that could occur with reconfiguring intersections within the existing right-of-way on Galindo Street. Specific roadway network changes that were evaluated are summarized in **Table 5**.
- **Signal Timing Changes** – Conditions with signal timing changes to decrease pedestrian delay at intersections.
- **Lane Geometry + Signal Timing Changes** – Conditions with lane geometry and signal timing changes combined.

**TABLE 5
 ROADWAY NETWORK CHANGES EVALUATED**

Intersection	Lane Change
Galindo Street/Willow Pass Road	<ul style="list-style-type: none"> • Convert southbound right turn lane to southbound shared through right turn lane • Increase northbound left pocket from 75 feet to 100 feet • Existing protected/permissive phasing modified to be protected only
Galindo Street/Concord Boulevard	<ul style="list-style-type: none"> • Convert southbound right turn lane and southbound through lane into one shared southbound through right lane • Convert westbound left lane and westbound through lane into one shared westbound through left lane • Remove one northbound left lane
Galindo Street/Clayton Road	<ul style="list-style-type: none"> • Add one southbound through lane • Remove one northbound left lane • Decrease southbound left pocket from 150 feet to 125 feet

Source: Fehr & Peers, January 2014.

Results of the assessment are presented in **Table 6** and **Table 7** for existing and future intersection operations and in **Table 8** for existing and future roadway segment operations. The



potential roadway network enhancements were evaluated against the following significance criteria:

- The addition of Project traffic causes an intersection to deteriorate from an unacceptable level to an unacceptable level, which is defined as LOS E.
- The Project substantially increases hazards or congestion due to excessive queuing.
- The Project results in inadequate emergency access.
- The Project conflicts with adopted transportation policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Results of the intersection service level assessment indicate that with the potential roadway network changes, operations of the study intersections would remain within the City's level of service standard for vehicles during both the morning and evening peak hours for both existing and future conditions. Detailed intersection level-of-service results are provided in **Attachment D**.

At the Galindo Street/Willow Pass Road intersection, delay would increase with the modification of the traffic signal to provide only protected left-turn phasing for movements from Willow Pass Road to Galindo Street. This modification would reduce pedestrian/vehicle conflicts, as currently vehicles turning left from Willow Pass Road are permitted to travel at the same time as pedestrians across Galindo Street.

Reducing the cycle length of traffic signals in the Downtown area to decrease pedestrian delay is not expected to degrade intersection operations beyond the level of service standard in the existing condition. Currently, cycle lengths on Galindo Street are between 110 and 120 seconds during the morning and evening peak hours. A reduction to between 95 and 100 seconds during peak hours would maintain vehicle levels of service while decreasing pedestrian delay; however, vehicle queue spillback could increase during the peak hours. A comprehensive evaluation of all signalized intersections in the downtown area should be conducted prior to reducing cycle lengths to ensure that vehicle progression is maintained along the corridor. An assessment of off-peak and weekend conditions should also be conducted as it is likely that greater cycle length reductions can be achieved during the mid-day and weekend time periods.

With projected traffic in the future, cycle length reductions of more than 10 seconds would rest in significant queue spillback between intersections on Galindo Street and would require further review as growth occurs within Downtown Concord and the surrounding area.

**TABLE 6
 EXISTING INTERSECTION PEAK HOUR DELAY AND LEVELS OF SERVICE FOR VEHICLES**

Location	Control ¹	Peak Hour	Existing		Lane Changes		Signal Timing		Lane Changes + Signal Timing	
			Delay ²	LOS	Delay ²	LOS	Delay ²	LOS	Delay ²	LOS
1. Concord Avenue / Pacheco Street	Signal	AM	5	A	5	A	5	A	5	A
		PM	9	A	9	A	8	A	8	A
2. Galindo Street / Willow Pass Road ³	Signal	AM	28	C	34	C	24	C	24	C
		PM	31	C	36	D	37	D	36	D
3. Galindo Street / Concord Boulevard ³	Signal	AM	21	C	27	C	16	B	20	B
		PM	18	B	21	C	13	B	16	B
4. Galindo Street / Clayton Road ³	Signal	AM	20	B	21	C	17	B	18	B
		PM	29	C	30	C	24	C	25	C
5. Galindo Street / Laguna Street / Oak Street	Signal	AM	16	B			17	B	17	C
		PM	13	B			13	B	14	C
6. Fry Way / Clayton Road	Signal	AM	9	A			9	A	9	A
		PM	12	B			13	B	12	B
7. Oakland Avenue / Clayton Road	Signal	AM	28	C			28	C	28	C
		PM	27	C			24	C	24	C
8. Galindo Street / Laguna Street	SSSC	AM	0 (15)	A (B)			0 (15)	A (B)	0 (15)	A (B)
		PM	0 (15)	A (B)			0 (15)	A (B)	0 (15)	A (B)

Notes:

- Signal = Signalized intersection, SSSC = side street stop controlled intersection
- Signalized intersection level of service based on average intersection control delay (in seconds) according to the *Highway Capacity Manual* (Transportation Research Board, 2010). For side-street stop-controlled intersections, delay is reported as intersection average (worst case approach).
- Periodic spillback of vehicle queues between intersections 2 through 4 can affect vehicle progression on Galindo Street and can result in worse service levels than presented here. MicroSimulation would be needed to fully quantify the effects of vehicle queue spillback on intersection operations.

Source: Fehr & Peers, January 2014.

**TABLE 7
 FUTURE INTERSECTION PEAK HOUR DELAY AND LEVELS OF SERVICE FOR VEHICLES**

Location	Control ¹	Peak Hour	Future Conditions (including DSP development)		Lane Changes		Signal Timing		Lane Changes + Signal Timing	
			Delay ²	LOS	Delay ²	LOS	Delay ²	LOS	Delay ²	LOS
1. Concord Avenue / Pacheco Street	Signal	AM	7	A	7	A	6	A	6	A
		PM	11	B	11	B	11	B	11	B
2. Galindo Street / Willow Pass Road ³	Signal	AM	37	D	55	D	40	D	39	D
		PM	41	D	51	D	52	D	47	D
3. Galindo Street / Concord Boulevard ³	Signal	AM	26	C	41	D	23	C	27	C
		PM	19	B	24	C	17	B	21	C
4. Galindo Street / Clayton Road ³	Signal	AM	22	C	22	C	20	C	21	C
		PM	36	D	36	D	32	C	32	C
5. Galindo Street / Laguna Street / Oak Street	Signal	AM	22	C			23	C	22	C
		PM	16	B			24	C	24	C
6. Fry Way / Clayton Road	Signal	AM	11	B			11	B	11	B
		PM	15	B			14	B	14	B
7. Oakland Avenue / Clayton Road	Signal	AM	61	E			40	D	40	D
		PM	41	D			34	C	34	C
8. Galindo Street / Laguna Street	SSSC	AM	0 (18)	A (B)			0 (18)	A (B)	0 (18)	A (B)
		PM	0 (18)	A (B)			0 (18)	A (B)	0 (18)	A (B)

Notes:

- Signal = Signalized intersection, SSSC = side street stop controlled intersection
- Signalized intersection level of service based on average intersection control delay (in seconds) according to the *Highway Capacity Manual* (Transportation Research Board, 2010). For side-street stop-controlled intersections, delay is reported as intersection average (worst case approach).
- Periodic spillback of vehicle queues between intersections 2 through 4 can affect vehicle progression on Galindo Street and can result in worse service levels than presented here. MicroSimulation would be needed to fully quantify the effects of vehicle queue spillback on intersection operations.

Source: Fehr & Peers, January 2014.

**TABLE 8
 EXISTING AND FUTURE WEEKDAY TRAFFIC VOLUMES**

Roadway	Existing Daily Traffic Conditions				Future Daily Traffic Conditions					
	Average Daily Traffic ¹	Existing Configuration		Alternative Configuration		Average Traffic ²	Existing Configuration		Alternative Configuration	
		Number of Lanes	Level of Service	Number of Lanes	Level of Service		Number of Lanes	Level of Service	Number of Lanes	Level of Service
1. Clayton Rd west of Grant St	15,400	5	D	4	D	20,020	5	D	4	D
2. Concord Blvd west of Grant St	17,200	5	D	4	D	22,360	5	D	4	D
3. Willow Pass Rd west of Grant St	20,700	4	D	2	F	26,910	4	D	2	F

Notes:

1. Average daily traffic measured over three weekdays.
 2. Existing data increased by 30 percent to reflect future conditions with development in the Downtown Specific Plan area and adjacent areas.
- Source: Fehr & Peers, January 2014.



VEHICLE MILES OF TRAVEL

The City of Concord adopted a Climate Action Plan (CAP) in 2013 which contains strategies and activities that the City and community can undertake to reduce greenhouse gas emissions produced within the City. As part of the plan preparation, estimates of the vehicle miles of travel (VMT) generated by land uses within the City of Concord were made for a 2005 baseline, 2020 and 2035 without implementation of CAP strategies (business as usual [BAU]). The estimates from the Climate Action Plan are summarized in **Table 9** and were prepared in consultation with City staff by a consultant team lead by ARUP. As documented in the CAP, the estimates were prepared using the CCTA travel demand model, which reflects the existing and planned level of development in Downtown Concord.

TABLE 9
VEHICLE MILES OF TRAVEL SUMMARY

Scenario	Total Citywide Annualized VMT ¹	Downtown Concord Uses (included in Citywide Total)	Downtown Concord as a Percentage of Citywide
Existing (2005)	873,600,000	137,200,000	16%
2020 BAU	907,600,000	142,100,000	16%
2035 BAU	1,290,000,000	142,100,000	11%

Source: City of Concord Citywide Climate Action Plan, March 2013, prepared by ARUP. Fehr & Peers, January 2014.

To assess the VMT generated by the land uses in the downtown area, Fehr & Peers used the CCTA model to calculate daily VMT for existing and potential uses in the downtown area. The daily estimate was converted into an annualized estimate for comparison purposes with the citywide totals, as shown in Table 9. As shown in Table 9, vehicle miles of travel are expected to increase as the City continues to grow. However, the percentage of VMT generated by uses in the downtown area is expected to decrease as a percentage of the citywide total due to redevelopment of the Naval Weapons Station which would increase the number of households and jobs in eastern Concord.

EFFECTS TO OTHER TRAVEL MODES

The DSP contains a number of goals and policies intended to enhance pedestrian, bicycle and transit circulation within and to the downtown area. Specific policies include eliminating the level of service standard for vehicles within the pedestrian priority zone, which would permit



enhancements to the pedestrian right-of-way that might degrade vehicle travel, such as widening sidewalks and providing curb extensions. Bicycle facilities will also be upgraded through the downtown area, including intersections enhancements such as bicycle detection at signalized intersections, additional bicycle parking within the public realm, and development and implementation of a citywide Bicycle Master Plan. A local circulator shuttle connecting the BART station to various destinations within the downtown area with transit stop enhancements will also be further evaluated for its feasibility to encourage greater transit usage through the Downtown area.

As the Downtown Specific Plan contains goals and policies that are aimed to improve pedestrian, bicycle and transit circulation in the downtown area, the impact to alternative travel modes is considered less than significant.

CONCLUSIONS

Results of the transportation assessment for the Downtown Specific Plan show that the land uses contemplated within the Plan Area are consistent with those envisioned within the General Plan. Assessment of intersections and roadway segments within the Plan Area indicates that with the proposed roadway network changes envisioned as part of the Specific Plan, automobile level of service would be maintained within the existing City level of service standard for the CBD, while enhancing travel for other modes.

This completes our assessment of transportation conditions for the Downtown Concord Specific Plan. Please call Kathrin if you have questions.

Attachments:

- Figure 1 Downtown Specific Plan Boundary
- Figure 2 Existing Roadway Network
- Figure 3 Existing Transit Network
- Figure 4 Existing and Planned Bicycle Network
- Figure 5 Existing Peak Hour and Daily Traffic Volumes
- Figure 6 Future Peak Hour and Daily Traffic Volumes
- Attachment A Level of Service Analysis Methods
- Attachment B MXD+ Methodology
- Attachment C Evaluation of the Conversion of Harrison/Bonifacio and Pacheco at Concord Avenue from One-Way to Two-Way Travel (December 2, 2013)
- Attachment D Level of Service Worksheets



ATTACHMENT A – LEVEL OF SERVICE ANALYSIS METHODS

The operations of roadway facilities are described with the term “level of service” (LOS). LOS is a qualitative description of traffic flow from a vehicle driver’s perspective based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels of service are defined ranging from LOS A (best vehicle progression) to LOS F (worst vehicle progression). LOS E corresponds to operations “at capacity.” When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F. Within the SPA, LOS E conditions for vehicles is acceptable – as documented in *Concord 2030 Urban Area General Plan* – since maintaining a higher level of service for vehicles could degrade the roadway system for other users, including pedestrians.

Traffic conditions at the study intersections were evaluated using the Synchro 8.0 software package, which analyzes intersections based on procedures described in the 2010 *Highway Capacity Manual* (HCM). The HCM method calculates control delay at an intersection based on inputs such as traffic volumes, lane geometry, signal phasing and timing, pedestrian crossing times, and peak hour factors. Control delay is defined as the delay directly associated with the traffic control device (i.e., a stop sign or a traffic signal) and specifically includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. These delay estimates are considered meaningful indicators of driver discomfort and frustration, fuel consumption, and lost travel time. The relationships between LOS and control delay for signalized and unsignalized intersections are described in **Table A-1** and **Table A-2**.

For roadway segments, the volume on each roadway was compared to thresholds identified in the *Concord 2030 Urban Area General Plan: Draft Environmental Impact Report*. Thresholds applied to the roadway segments in this assessment are shown in **Table A-3**.

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**TABLE A-1:
SIGNALIZED INTERSECTION LOS CRITERIA**

Level of Service	Description	Delay in Seconds
A	Progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	< 10.0
B	Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	> 10.0 to 20.0
C	Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.	> 20.0 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression and long cycle lengths. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	> 35.0 to 55.0
E	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression and long cycle lengths. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be contributing factors to such delay levels.	> 80.0

Source: 2010 Highway Capacity Manual, Technical Procedures, Contra Costa Transportation Authority, 2012.

**TABLE A-2:
UNSIGNALIZED INTERSECTION LOS CRITERIA**

Level of Service	Description	Delay in Seconds
A	Little or no delays	≤ 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: 2010 Highway Capacity Manual.



**TABLE A-3:
ANNUAL AVERAGE DAILY VOLUMES FOR SERVICE LEVELS ON ROADWAY SEGMENTS**

Class IV (more than 4.5 signalized intersections per mile and within primary City central business district)					
Lanes	Divided	Level of Service			
		A/B	C	D	E
2	Undivided	--	5,200	13,700	15,000
4	Divided	--	12,300	30,300	31,700
5	Divided	--	15,700	38,050	39,650
6	Divided	--	19,100	45,800	47,600
8	Divided	--	25,900	59,900	62,200

Source: Table 3.3-5 of *Concord 2030 Urban Area General Plan: Draft Environmental Impact Report* and <http://www.dot.state.fl.us/planning/systems/sm/los/pdfs/OLOStables2002.pdf>.

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ATTACHMENT B – MXD+ METHODOLOGY

Current accepted methodologies, such as the Institute of Transportation Engineers (ITE) *Trip Generation* methodology, are primarily based on data collected at suburban, single-use, freestanding sites. These defining characteristics limit their applicability to mixed-use or multi-use development projects, such as the East Pleasanton Specific Plan area. The land use mix, design features, and setting of the East Pleasanton Specific Plan would include characteristics that influence travel behavior differently from typical single-use suburban developments. Thus, traditional data and methodologies, such as ITE, would not accurately estimate the project vehicle trip generation. In response to the limitations in the ITE methodology, and to provide a straightforward and empirically validated method of estimating vehicle trip generation at mixed-use developments, the US Environmental Protection Agency (EPA) sponsored a national study of the trip generation characteristics of multi-use sites. Travel survey data was gathered from 239 mixed-use developments (MXDs) in six major metropolitan regions, and correlated with the characteristics of the sites and their surroundings. The findings indicate that the amount of external traffic generated is affected by a wide variety of factors, each pertaining to one or more of the following characteristics:

- **The relative numbers of residents and jobs on the site** – the better the site jobs/ housing balance, the greater the proportion of commute trips that remain internal.
- **The amount of retail and service use on the site relative to the number of residences** – the greater the degree to which retail and service opportunities match the needs generated by site residents, the greater the internalization of household-generated shopping, personal services and entertainment travel.
- **The amount of retail and service use relative to the number of employees** – the better the balance of employee-oriented retail and service opportunities, the greater the internal capture of lunchtime and after-work dining, shopping and errands by site employees.
- **The overall size of the development** – the larger the scale of the development in terms of acreage and total amounts of residential and commercial use, the greater the likelihood that travel destinations can be satisfied within the site as a whole.
- **The density of development** – the greater the concentration of dwellings and commercial space per acre, the greater the likelihood that the interacting land uses will be near enough together to encourage walking or short-distance internal driving.
- **The internal connectivity for walking or driving among different activities** – measured in terms of the ratio of intersections to total land area within the site directly influences trip internalization and the number of trips made by walking instead of driving.



- **The availability of transit** – the greater the number of jobs within a reasonable travel time via transit, the greater the share of travel likely to occur by transit, and the lower the traffic generation.
- **The number of convenient trip destinations within the immediate area** – the number of retail and other jobs in neighborhoods immediately surrounding the multi-use site reduces the amount of walking to/from the site and reduce traffic generation.

These characteristics were related statistically to the trip behavior observed at the study development sites using Hierarchical Linear Modeling (HLM) techniques. This quantified relationships between characteristics of the MXDs and the likelihood that trips generated by those MXDs will stay internal and/or use modes of transportation other than the private vehicle. These statistical relationships produced equations, known as the EPA MXD model, that allows predicting external vehicle trip reduction as a function of the MXD characteristics. Applying the external vehicle trip reduction percentage to “raw trips”, as predicted by ITE, produces an estimate for the number of vehicle trips traveling in or out of the site.

Validation of MXD+ model

Since the conclusion of the EPA sponsored study, Fehr & Peers has been actively enhancing the MXD model to improve sensitivity to various site characteristics, improve peak hour performance, and continue to validate the model against MXDs where data is available.

A set of 27 independent MXD sites across the country that were not included in the initial model development have been tested to validate the model. These sites represent locations where it is expected that traditional data and methodologies, such as ITE, would not accurately estimate the Project vehicle trip generation. **Table B-1** presents the performance of the MXD model against ITE and ITE internalization procedures. Based on all statistical measurements, the MXD model performs better than the ITE recommended procedures for these types of sites.

The MXD model has been approved for use by the EPA⁵. It has also been peer-reviewed in the ASCE Journal of Urban Planning and Development⁶, peer-reviewed in a 2012 TRB paper evaluating various smart growth trip generation methodologies⁷, recommended by SANDAG for use on mixed-use smart

⁵ Trip Generation Tool for Mixed-Use Developments (2012). www.epa.gov/dced/mxd_tripgeneration.html

⁶ “Traffic Generated by Mixed-Use Developments—Six-Region Study Using Consistent Built Environmental Measures.” *Journal of Urban Planning and Development*, 137(3), 248–261.

⁷ Shafizadeh, Kevan et al. “Evaluation of the Operation and Accuracy of Available Smart Growth Trip Generation Methodologies for Use in California”. Presented at 91st Annual Meeting of the Transportation Research Board, Washington, D.C., 2012.

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growth developments⁸, promoted in an American Planning Association (APA) Planning Advisory Service (PAS)⁹ which recommended it for evaluating traffic generation of mixed-use and other forms of smart growth, including in-fill and transit oriented development. It has also been used successfully in multiple certified EIRs in California (see **Table B-2**).

**TABLE B-1
MXD+ MODEL
VALIDATION STATISTICS COMPARISON**

Validation Statistic	ITE raw	ITE with internalization	MXD+ model
Daily			
Average Model Error ¹	28%	16%	2%
% RMSE ²	40%	27%	17%
R-Squared ³	0.77	0.89	0.96
AM Peak Hour			
Average Model Error	54%	49%	12%
% RMSE	54%	53%	21%
R-Squared	0.81	0.81	0.97
PM Peak Hour			
Average Model Error	49%	35%	4%
% RMSE	64%	49%	15%
R-Squared	0.40	0.65	0.97

1. Average model error measures the difference between the estimated trip generation and the counted trip generation of the 28 survey sites.
2. RMSE stands for percent root mean squared error is a demand assessment of performance of transportation models in that it does not apply average that would allow over-estimates and under-estimates to cancel one another out and it penalizes proportionally more for large errors. A % RMSE of less than 40% is generally considered acceptable in transportation modeling.
3. R-squared is a statistical measure that indicates, in this case, the degree to which each method explains the variation in trip generation amongst the 27 survey sites. A R-Squared value closer to 1.0 indicates that the method fully explains the variation in trip generation amongst the survey sites and would be suitable to be used for that set of site types.

Source: Fehr & Peers, 2013.

⁸ SANDAG Smart Growth Trip Generation and Parking Study.
<http://www.sandag.org/index.asp?projectid=378&fuseaction=projects.detail>

⁹ Walters, Jerry et al. "Getting Trip Generation Right – Eliminating the Bias Against Mixed Use Development". American Planning Association. May 2013.

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TABLE B-2
CERTIFIED EIRS USING MXD+ (4Ds) MODEL

Name	Date Published	Jurisdiction	Description	% Reduction
Treasure Island DEIR¹	July 2010	City of San Francisco	8,000 DUs 140,000 SF retail 100,000 SF office 311,000 SF commercial flex 274,000 SF other	56-61% reduction
Candlestick Point / Hunters Point DEIR²	November 2009	City of San Francisco	10,500 DUs 885,000 SF retail 2,650,000 SF office/R&D	44-50% reduction
Parkmerced DEIR³	May 2010	City of San Francisco	8,900 DUs 230,000 SF retail 105,000 SF office 164,000 SF other	34-38% reduction
Fairfield Train Station DEIR⁴	December 2010	City of Fairfield	6,790 DUs 150,000 SF retail	25% reduction
Redwood City Downtown Precise Plan DEIR⁵	August 2010	Redwood City	2,500 DUs 221,000 SF retail 275,000 SF office	21-29% reduction
Pittsburg/Bay Point BART Station Master Plan DEIR⁶	June 2011	City of Pittsburg	1,168 DU 95,000 SF retail 50,000 SF office	26-32% reduction
Newhall Ranch Draft EIS/EIR⁷	April 2009	Los Angeles County U.S. Army Corps of Engineers	21,000 DUs 5,500,000 SF commercial	29-33% reduction
Broadway-Valdez District Specific Plan	Published September 2013	City of Oakland	1,796 DUs 1,118,345 SF retail 694,730 SF office 180 Hotel rooms	27-34% reduction
Coliseum City Specific Plan	On-going	City of Oakland	4,102 DUs 506,500 SF retail 6,028,700 SF office/R&D 260 Hotel rooms	37-45% reduction

1. http://sfplanning.org/index.aspx?page=1828#2007_0903E
 2. http://sfplanning.org/index.aspx?page=1828#2007_0946E
 3. http://sfplanning.org/index.aspx?page=1828#2008_0021E

4. http://www.fairfield.ca.gov/depts/cd/planning/train_station_deir.asp
 5. <http://www.redwoodcity.org/phed/planning/precise/FINAL-DTTP/EIR.htm>
 6. <http://www.ci.pittsburg.ca.us/index.aspx?page=225>
 7. <http://www.dfg.ca.gov/regions/5/newhall/final/>

Source: Fehr and Peers, 2013.



Table B-3 summarizes the input values and data sources for the MXD model for the Downtown Concord Specific Plan.

**TABLE B-3
 DOWNTOWN CONCORD
 MXD+ MODEL INPUTS**

Input Variable	Proposed Project	Source
<i>MXD specific inputs</i>		
Project Area (Acres)	618	Specific Plan
Intersections per Square Mile	136	Existing Network
Transit Available at Site	Yes	Project site plan
Average Household Size for Multi-Family Units within and near the Project site	2.5	Specific Plan Existing Conditions Report
Average Vehicles Owned per Dwelling Unit within / near the Project site	1.00/1.70	ACS 5-Year Estimate
Employment within 1 mile of Project site	66,200	MTC and Alameda CTC Travel Demand Models
Employment within a 30 minute trip by transit	75,000	MTC and Alameda CTC Travel Demand Models
Total Regional Employment	3,498,590	MTC and Alameda CTC Travel Demand Models
<i>Land Use Inputs</i>		
Single Family (Dwelling Units)	1,354	Specific Plan
Multi Family (Dwelling Units)	6,388	Specific Plan
Townhouse (Dwelling Units)	518	Specific Plan
Retail (SF)	1,210,000	Specific Plan
Office (SF)	3,868,000	Specific Plan
Light Manufacturing (SF)	170,000	CCTA Model
Warehouse (SF)	369,000	CCTA Model

Source: Fehr & Peers, 2013.



Attachment C – Evaluation of the Conversion of Harrison/Bonifacio and Pacheco at Concord Avenue from One-Way to Two-Way Travel



MEMORANDUM

Date: December 2, 2013
To: Ray Kuzbari, City of Concord
From: Kathrin Tellez
Subject: **Evaluation of the Conversion of Harrison/Bonifacio and Pacheco at Concord Avenue from One-Way to Two-Way Travel**

WC13-3083

Fehr & Peers evaluated the potential to convert Harrison Street/Bonifacio Street and Pacheco Street at Concord Avenue from one-way to two-way operations (Project). The Project was suggested during development of the Downtown Concord Specific Plan, with the goal of improving the connectivity within the Plan area for all modes of travel. This memo presents the assessment of intersection operations for all travel modes, without and with the Project, summarizes potential benefits and disadvantages for all travel modes, and identifies potential intersection modifications that would be recommended with the Project.

The following summarizes the study area and data collection, analysis methods, analysis results, benefits and disadvantages for all travel modes, and conclusions.

STUDY AREA AND DATA COLLECTION

Concord Avenue is a four to six lane arterial roadway that connects State Route 242 with Downtown Concord, where it continues as Galindo Street. It provides for not only regional through travel, but also accommodates trips within the Downtown area. Traffic signals are coordinated along Concord Avenue and generally operate on 120 second cycle lengths. At Concord Avenue, Harrison Street/Bonifacio Street and Pacheco Street form a one-way couplet system, with Harrison Street/Bonifacio Street providing westbound travel and Pacheco Street provides eastbound travel. **Figure 1** displays the study area.

Weekday evening (4:00 to 6:00 PM) peak period intersection turning movement counts were conducted at the Concord Avenue at Pacheco Street intersection, including counts of pedestrians and bicyclists, in May 2013. Older counts traffic counts at the Harrison Street/Bonifacio Street



intersection were used to determine side-street movements at that intersection, and were balanced with the more recent through counts at the Pacheco Street intersection for through volumes on Concord Avenue. The peak hour on Concord Avenue is generally between 5:00 PM to 6:00 PM. **Figure 2** displays the existing intersection volumes in addition to bicycle and pedestrian volumes at the two study intersections.

To estimate conditions with Harrison Street/Bonifacio Street and Pacheco Street converted from one-way to two-way operations, traffic volumes turning to/from each street were reassigned to the roadway network. For this analysis, it was assumed that turning movement demand would evenly distribute between the two intersections; for example, half of the existing demand for the southbound left turn at Pacheco Street would turn left at Bonifacio Street with the Project. The resulting turn movement volumes were then increased by 25 percent as increased mobility might change some driver's travel behavior through the corridor. The resulting volumes used in the analysis are also shown on Figure 2.

ANALYSIS METHODOLOGY

The operations of roadway facilities are described with the term "level of service" (LOS). LOS is a qualitative description of traffic flow from a vehicle driver's perspective based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels of service are defined ranging from LOS A (best vehicle progression) to LOS F (worst vehicle progression). LOS E corresponds to operations "at capacity." When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F. Within the Downtown Concord area, LOS E conditions for vehicles is acceptable – as documented in *Concord 2030 Urban Area General Plan* – since maintaining a higher level of service for vehicles could degrade the roadway system for other users, including pedestrians.

Traffic conditions at the study intersections were evaluated using the Synchro 8.0 software package, which analyzes intersections based on procedures described in the 2010 *Highway Capacity Manual* (HCM). The HCM method calculates control delay at an intersection based on inputs such as traffic volumes, lane geometry, signal phasing and timing, pedestrian crossing times, and peak hour factors. Control delay is defined as the delay directly associated with the traffic control device (i.e., a stop sign or a traffic signal) and specifically includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. These delay estimates are considered meaningful indicators of driver discomfort and frustration, fuel consumption, and lost travel time. The relationships between LOS and control delay for vehicles at signalized intersections are described in **Table 1**.



**TABLE 1
 SIGNALIZED INTERSECTION LOS CRITERIA**

Level of Service	Description	Delay in Seconds
A	Progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	< 10.0
B	Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	> 10.0 to 20.0
C	Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.	> 20.0 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression and long cycle lengths. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	> 35.0 to 55.0
E	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression and long cycle lengths. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be contributing factors to such delay levels.	> 80.0

Source: 2010 Highway Capacity Manual, Technical Procedures, Contra Costa Transportation Authority, 2012.

To evaluate pedestrian and bicycle operations through the intersection, the average delay for bicyclists and pedestrians traveling through the intersection was calculated using methods consistent with the 2010 HCM. These calculations were supplemented by a qualitative assessment of the pedestrian and bicycle experience through the intersection.

ANALYSIS RESULTS

Intersection operations were evaluated for vehicles, bicycles and pedestrians for the existing and with Project conditions. Preliminary analysis was conducted assuming that the east-west movements would operate with split phasing, where eastbound and westbound movements are served by separate signal phases. With this phasing, two-way operations would increase the minimum cycle length, require retiming of intersections along the entire Concord Avenue corridor, and would increase pedestrian and bicycle delay. This was not considered a desirable outcome of the Project. Enhancements at each intersection that would be necessary to convert



the streets to two-way travel, without degrading bicycle and pedestrian travel were developed as summarized in **Table 2** and depicted on **Figure 3**.

**TABLE 2
 RECOMMENDED INTERSECTION MODIFICATIONS
 WITH ONE-WAY TO TWO-WAY CONVERSION**

Intersection Component	Concord at Bonifacio/Harrison	Concord at Pacheco
Geometry	<ul style="list-style-type: none"> • Remove southbound u-turn median opening • Add southbound left and u-turn lane • Remove part of pedestrian island on north crosswalk • Remove one westbound thru lane • Add eastbound lanes (one shared right-thru lane and one left turn pocket) 	<ul style="list-style-type: none"> • Remove one southbound left lane • Add westbound lanes (one shared right-thru and one left-turn only) • Add eastbound left-turn lane (may require widening of Adobe Street) • Add crosswalk to northern leg • Stipe outside southbound lane to accommodate through and right-turn movements
Left-turn Signal Phasing	<ul style="list-style-type: none"> • Protected left turn phasing for all movements 	<ul style="list-style-type: none"> • Protected left turn phasing for southbound left, eastbound left, and westbound left (northbound left-turn movements would not be accommodated)
Signal Timing	<ul style="list-style-type: none"> • Actuated-coordinated with 120 second cycle length • No adjustments to pedestrian phasing/clearance time 	<ul style="list-style-type: none"> • Actuated-coordinated with 120 second cycle length • Adjust pedestrian clearance time to accommodate crossing in one stage

Source: Fehr & Peers, 2013

Intersection operations were then evaluated with the volumes presented on Figure 2, and the intersection enhancements described above. Intersection evaluation results are presented in **Table 3** for the Harrison Street/Bonifacio Street intersection and **Table 4** for the Pacheco Street intersection with Concord Avenue.



**TABLE 3
 CONCORD AVENUE/ HARRISON STREET/BONIFACIO STREET OPERATIONS**

Mode	Existing			Existing Plus Project	
	Movement	Delay ¹ (sec)	Demand	Delay (sec)	Demand
Vehicle	Intersection Average	18/LOS B	3,070	21/LOS C	3,248
	Westbound	29/LOS C		39/LOS D	
	Eastbound	N/A		40/LOS D	
	Northbound	14/LOS B		15/LOS B	
	Southbound	21/LOS C		23/LOS C	
Bicycle	Intersection Average	17	25	20	25
Pedestrian	Intersection Average	71	55	71	55

Notes:

1. Vehicle delay exactly follows Highway Capacity Manual 2010 methodology; bicycle and pedestrian delay estimated with a modified HCM 2010 methodology

Vehicles and bicyclists experience an average delay of less than 20 seconds at the Bonifacio Street/Concord Avenue intersection, while pedestrians can experience over a minute of delay. With the Project, bicycle and vehicle delay would increase slightly given the additional signal phases, and pedestrian delay would stay the same for Concord/Bonifacio because cycle length and pedestrian clearance times would not change with the Project.

Although average delay for bicyclists has been shown to marginally change with the Project, converting the streets from one-way to two-way travel would have the potential to decrease circuitous travel for bicyclist and reduce delay for bicyclists traveling against the vehicle flow. Bicyclists traveling in the opposite direction of vehicles on Harrison Street, for example, are only able to travel across Concord Avenue at the same time as pedestrians. If a pedestrian had not activated the signal, the bicyclist would need to enter the sidewalk area to activate the pedestrian crossing. In this instance, a bicyclist would experience delays at a similar level to pedestrian delay. Although there is a low instance of this movement occurring, the facility design is likely discouraging potential bicycle travel through the area.



**TABLE 4
 CONCORD AVENUE/PACHECO STREET OPERATIONS**

Mode	Existing			Existing Plus Project	
	Movement	Delay ¹ (sec)	Demand	Delay (sec)	Demand
Vehicle	Intersection Average	7/LOS A	2,820	17/LOS B	2,990
	Westbound	N/A		32/LOS C	
	Eastbound	49/LOS D		40/LOS D	
	Northbound	6/LOS A		18/LOS B	
	Southbound	6/LOS A		15/LOS B	
Bicycle	Intersection Average	6	20	16	20
Pedestrian	Intersection Average	81	60	59	60

Notes:

1. Vehicle delay exactly follows Highway Capacity Manual 2010 methodology; bicycle and pedestrian delay estimated with a modified HCM 2010 methodology

Vehicles and bicyclists experience an average delay of less than 10 seconds at the Pacheco Street/Concord Avenue intersection, while pedestrians can experience over a minute of delay. With the Project, bicycle and vehicle delay would increase slightly given the additional signal phases, and pedestrian delay would decrease with the addition of a crosswalk on the northern leg and removal of the two-stage crossing on the southern leg. The skewed crossing increases overall pedestrian crossing distance and results in a two stage crossing, which can significantly increase pedestrian crossing time. Realigning the crosswalk would potentially reduce the overall crossing distance by about 20 feet, and decrease the total crossing time by about six seconds. Although this is a relatively modest decrease, it would enhance pedestrian connectivity in the downtown area.

BENEFITS AND DISADVANTAGES OF TWO-WAY OPERATIONS

Conversion from one-way to two-way operations provides benefits and disadvantages not captured in an analysis of average intersection delay. This section summarizes some of the



benefits and disadvantages to the travel modes analyzed in this memo, as well as to transit riders and general land use effects.

One-way couplets, two parallel streets each serving one travel direction, are roadway network alignments that maximize vehicle throughput and can improve vehicle safety. They have been implemented in many locations where right-of-way is constrained and roadway widening to provide increased vehicle capacity is not feasible. As a consequence, vehicle trips are often indirect and adjacent land uses are not readily accessed. There are also disadvantages to pedestrians, who are adversely affected by potentially high vehicle speeds and auto-dominant environments. There has been a movement in many cities to convert one-way street networks to two-way travel, but there are benefits and disadvantages associated with network conversion, as summarized in **Table 5** for each travel mode.

**TABLE 5
 TWO-WAY TRAVEL DISADVANTAGES AND ADVANTAGES**

Mode	Disadvantage of Two-Way Conversion	Advantage of Two-Way Conversion
Vehicles	<ul style="list-style-type: none"> • Higher trip serving capacity in a one-way street network • Increased number of vehicle conflict points at the intersection • Reduced vehicle speeds for drivers traveling through downtown • Increased average intersection delay • Constrained right-of-way could affect intersection design 	<ul style="list-style-type: none"> • More direct routing between origins and destination; lower VMT • Less circulation in the area • Reduced driver confusion
Bicyclists	<ul style="list-style-type: none"> • Increased number of vehicle/bicycle conflict points at intersection • Increased average intersection delay 	<ul style="list-style-type: none"> • More direct routing between origins and destinations • Slower vehicle speeds could improve bicycling environment • Decreased delay for some movements
Pedestrians	<ul style="list-style-type: none"> • Increased number of pedestrian/vehicle conflict points at intersection • Change in pedestrian delay depends on geometric changes accompanying two-way conversion 	<ul style="list-style-type: none"> • Decreased vehicle speeds could improve walking environment • Potential for decreased delay with changes to signal timing, additional crossing locations, reduced crossing distance
Bus Riders	<ul style="list-style-type: none"> • Could increase travel time along transit corridors 	<ul style="list-style-type: none"> • Bus stops in both directions are on the same street; less rider confusion • Potential for more direct bus routing



**TABLE 5
 TWO-WAY TRAVEL DISADVANTAGES AND ADVANTAGES**

Mode	Disadvantage of Two-Way Conversion	Advantage of Two-Way Conversion
Land Use	<ul style="list-style-type: none"> Land uses and access locations may be designed for one-way travel and conversion is best considered with land use and other roadway network changes 	<ul style="list-style-type: none"> Higher accessibility and visibility from adjacent roadway system

Sources:

Fehr & Peers, 2013

Gayah, V. Two-Way Street Networks: More Efficient than Previously Thought? Access, 2012

Stemley, J. One-Way Streets Provide Superior Safety and Convenience. ITE Journal, August 1998

CONCLUSION

Analysis results indicate that conversion from one-way to two-way travel would not result in significantly worsened travel through the corridor for vehicles and would enhance bicycle and pedestrian accessibility within the area. However, given the extensive intersection reconstruction that would be required to avoid worsening conditions for pedestrians, these changes might be better considered as a long-term improvement to be implemented with other land use and network changes in the area. Alternative improvements that could enhance pedestrian and bicycle connectivity in the near-term include:

- Reduce cycle lengths along Concord Avenue/Galindo Street and throughout the Downtown area to decrease pedestrian wait time at all signalized intersection. This could be implemented in conjunction with restriping Concord Avenue/Galindo Street to convert some right-turn only lanes to through-right shared lanes which could reduce the potential for vehicle queue spillback through the corridor with reduced cycle lengths
- Contraflow bike lanes on Harrison Street and Bonifacio Street if bicycle facilities are installed on these roadways, with signal modifications to improve bicycle connectivity across Concord Avenue
- Road diet (elimination of a travel lane) on Harrison Street and Bonifacio Street

This concludes our preliminary assessment of the potential conversion of Harrison Street/Bonifacio Street and Pacheco Street at Concord Avenue from one-way to two-way operations. Please call Kathrin if you have questions.

Attachments:

Figure 1 Study Area

Figure 2 Before and After Intersection Volumes and Lane Configurations

Figure 3 Potential Modifications with Two-Way Operations



Figure 1.

Study Area

WCI3-3083_1_StudyArea

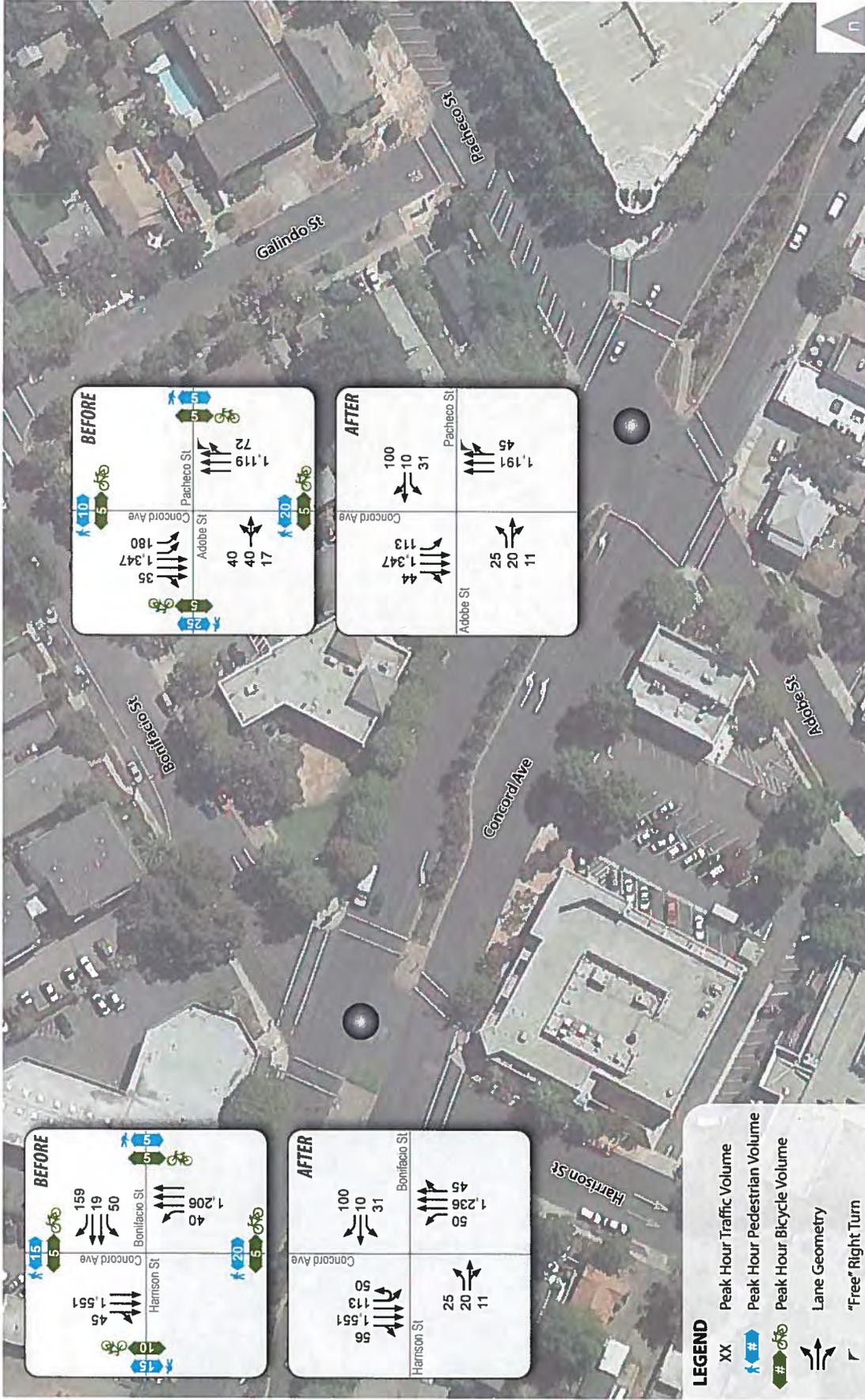


Figure 2.

Before and After Intersection Volumes and Lane Configurations

WCI13-3083_2_M06

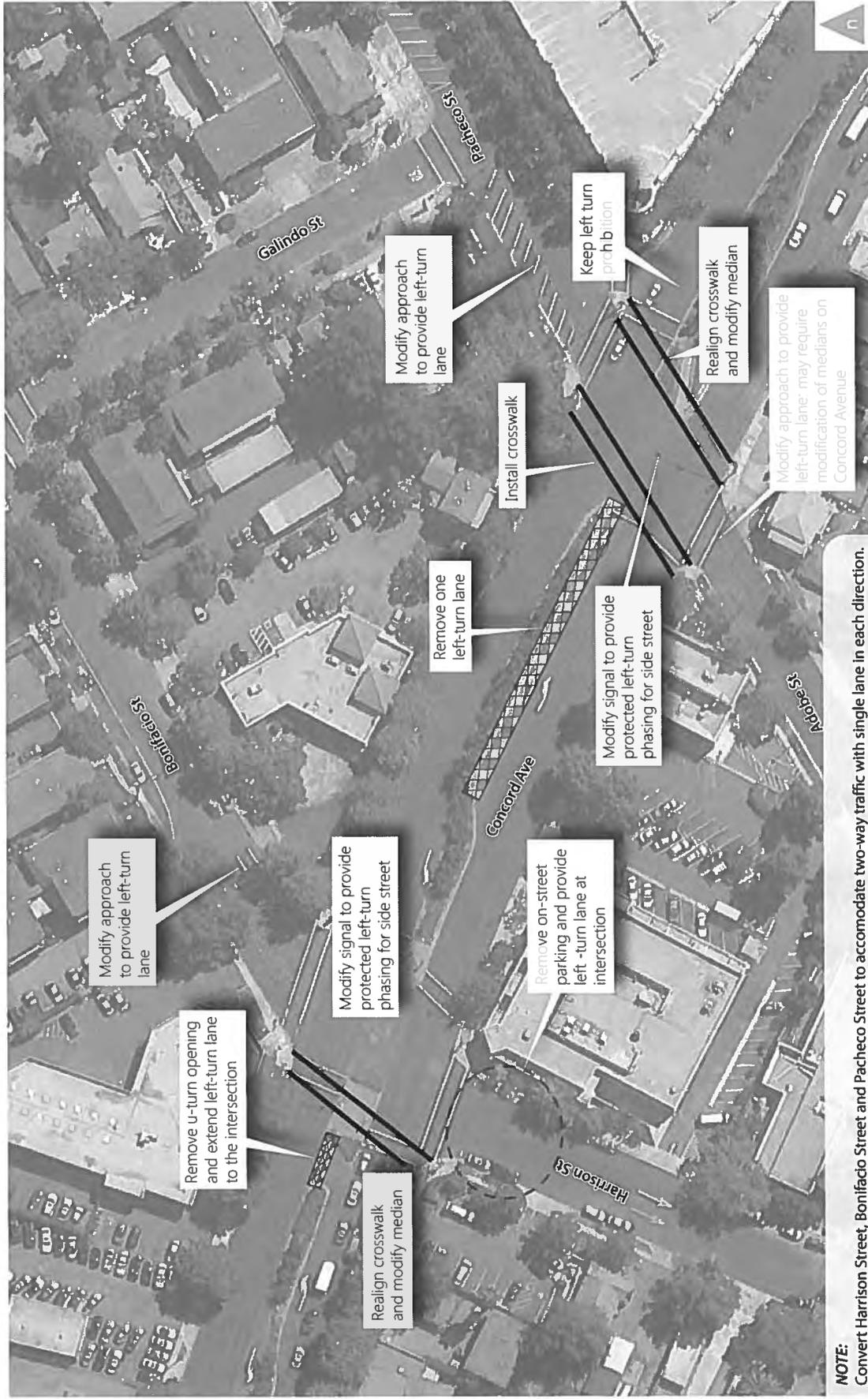


Figure 3.

Potential Modifications with Two-Way Operations

WCI13-3083_3_TwoWayMod

FEHR & PEERS

Attachment D – Level of Service Worksheets

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑↑		↕↕	↑↑↑	
Volume (veh/h)	14	16	6	0	0	0	0	1347	72	68	736	7
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	184.5	190.0				0.0	184.5	190.0	181.0	181.0	190.0
Adj Flow Rate, veh/h	16	18	1				0	1497	0	76	818	8
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	3	0				0	3	3	5	5	5
Cap, veh/h	45	51	3				0	3764	0	183	4259	42
Arrive On Green	0.06	0.06	0.06				0.00	0.75	0.00	0.05	0.84	0.84
Sat Flow, veh/h	819	922	51				0	5368	0	3343	5044	49
Grp Volume(v), veh/h	35	0	0				0	1497	0	76	534	292
Grp Sat Flow(s),veh/h/ln	1792	0	0				0	1679	0	1672	1647	1800
Q Serve(g_s), s	1.8	0.0	0.0				0.0	10.1	0.0	2.1	2.9	2.9
Cycle Q Clear(g_c), s	1.8	0.0	0.0				0.0	10.1	0.0	2.1	2.9	2.9
Prop In Lane	0.46		0.03				0.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	99	0	0				0	3764	0	183	2781	1520
V/C Ratio(X)	0.35	0.00	0.00				0.00	0.40	0.00	0.42	0.19	0.19
Avail Cap(c_a), veh/h	388	0	0				0	3764	0	741	2781	1520
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.81	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	0.0	0.0				0.0	4.3	0.0	43.3	1.4	1.4
Incr Delay (d2), s/veh	2.1	0.0	0.0				0.0	0.3	0.0	1.5	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0				0.0	4.7	0.0	1.0	1.3	1.5
LnGrp Delay(d),s/veh	45.2	0.0	0.0				0.0	4.6	0.0	44.8	1.5	1.7
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		35						1497			902	
Approach Delay, s/veh		45.2						4.6			5.2	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		100.3		9.7	9.2	91.1						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		80.0		20.5	21.0	55.0						
Max Q Clear Time (g_c+I1), s		4.9		3.8	4.1	12.1						
Green Ext Time (p_c), s		36.0		0.0	0.2	26.9						
Intersection Summary												
HCM 2010 Ctrl Delay			5.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
2: Galindo St & Willow Pass Rd

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	233	49	162	651	232	95	1101	104	79	596	21
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.98	1.00		0.98	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	188.1	188.1	188.1	184.5	184.5	190.0	182.7	182.7	182.7
Adj Flow Rate, veh/h	53	253	48	176	708	172	103	1197	113	86	648	23
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	210	689	129	412	1030	450	133	1933	182	111	1396	622
Arrive On Green	0.03	0.23	0.23	0.09	0.29	0.29	0.08	0.41	0.41	0.02	0.13	0.13
Sat Flow, veh/h	1774	2971	555	1792	3574	1561	1757	4674	441	1740	3471	1546
Grp Volume(v), veh/h	53	149	152	176	708	172	103	860	450	86	648	23
Grp Sat Flow(s),veh/h/ln	1774	1770	1756	1792	1787	1561	1757	1679	1758	1740	1736	1546
Q Serve(g_s), s	2.0	6.3	6.5	6.4	15.7	7.9	5.2	18.1	18.1	4.4	15.4	1.2
Cycle Q Clear(g_c), s	2.0	6.3	6.5	6.4	15.7	7.9	5.2	18.1	18.1	4.4	15.4	1.2
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	210	410	407	412	1030	450	133	1388	727	111	1396	622
V/C Ratio(X)	0.25	0.36	0.37	0.43	0.69	0.38	0.78	0.62	0.62	0.77	0.46	0.04
Avail Cap(c_a), veh/h	309	653	648	412	1318	576	373	1388	727	272	1396	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	0.99	0.99	0.99
Uniform Delay (d), s/veh	25.6	28.8	28.9	21.9	28.3	25.5	40.6	20.7	20.7	43.1	29.9	23.7
Incr Delay (d2), s/veh	0.6	0.5	0.6	0.7	1.0	0.5	7.6	1.7	3.2	10.6	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.2	3.2	3.2	7.9	3.4	2.8	8.7	9.4	2.5	7.7	0.5
LnGrp Delay(d),s/veh	26.2	29.4	29.5	22.6	29.3	26.0	48.2	22.3	23.8	53.7	31.0	23.8
LnGrp LOS	C	C	C	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h		354			1056			1413			757	
Approach Delay, s/veh		28.9			27.7			24.7			33.4	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	25.7	10.8	61.5	7.0	30.8	9.7	62.5				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	8.0	33.0	19.0	32.0	8.0	33.0	14.0	37.0				
Max Q Clear Time (g_c+I1), s	8.4	8.5	7.2	17.4	4.0	17.7	6.4	20.1				
Green Ext Time (p_c), s	0.0	8.1	0.2	10.7	0.0	6.5	0.1	12.0				
Intersection Summary												
HCM 2010 Ctrl Delay			27.8									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	249	1095	450	166	884	0	0	740	76
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				184.5	184.5	184.5	182.7	182.7	0.0	190.0	181.0	181.0
Adj Flow Rate, veh/h				259	1141	295	173	921	0	0	771	50
Adj No. of Lanes				1	3	1	2	2	0	0	3	1
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	4	4	0	5	5	5
Cap, veh/h				509	1458	444	248	2139	0	0	2484	769
Arrive On Green				0.29	0.29	0.29	0.07	0.62	0.00	0.00	1.00	1.00
Sat Flow, veh/h				1757	5036	1532	3375	3563	0	0	5103	1530
Grp Volume(v), veh/h				259	1141	295	173	921	0	0	771	50
Grp Sat Flow(s),veh/h/ln				1757	1679	1532	1688	1736	0	0	1647	1530
Q Serve(g_s), s				12.4	20.9	17.1	5.0	14.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				12.4	20.9	17.1	5.0	14.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				509	1458	444	248	2139	0	0	2484	769
V/C Ratio(X)				0.51	0.78	0.67	0.70	0.43	0.00	0.00	0.31	0.07
Avail Cap(c_a), veh/h				672	1927	586	671	2139	0	0	2484	769
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.94	0.94	0.00	0.00	0.89	0.89
Uniform Delay (d), s/veh				29.8	32.8	31.5	45.5	10.1	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				0.8	1.6	1.8	3.3	0.6	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.1	9.9	7.4	2.5	6.8	0.0	0.0	0.1	0.0
LnGrp Delay(d),s/veh				30.6	34.4	33.2	48.8	10.7	0.0	0.0	0.3	0.1
LnGrp LOS				C	C	C	D	B			A	A
Approach Vol, veh/h					1695			1094			821	
Approach Delay, s/veh					33.6			16.7			0.3	
Approach LOS					C			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	11.4	65.0		33.6		76.4						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	20.0	38.0		38.5		62.0						
Max Q Clear Time (g_c+1), s	7.0	2.0		22.9		16.0						
Green Ext Time (p_c), s	0.4	17.0		6.2		18.8						
Intersection Summary												
HCM 2010 Ctrl Delay				20.9								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
4: Galindo St & Clayton Rd

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	134	731	153	0	0	0	0	908	111	254	733	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	182.7	182.7				0.0	182.7	182.7	182.7	182.7	0.0
Adj Flow Rate, veh/h	154	840	113				0	1044	91	292	843	0
Adj No. of Lanes	0	4	1				0	4	1	2	2	0
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	225	1335	353				0	2756	661	585	2301	0
Arrive On Green	0.24	0.24	0.24				0.00	0.44	0.44	0.35	1.00	0.00
Sat Flow, veh/h	937	5556	1469				0	6540	1507	3375	3563	0
Grp Volume(v), veh/h	293	701	113				0	1044	91	292	843	0
Grp Sat Flow(s),veh/h/ln	1780	1571	1469				0	1571	1507	1688	1736	0
Q Serve(g_s), s	14.6	13.0	6.2				0.0	11.0	3.5	6.7	0.0	0.0
Cycle Q Clear(g_c), s	14.6	13.0	6.2				0.0	11.0	3.5	6.7	0.0	0.0
Prop In Lane	0.53		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	428	1132	353				0	2756	661	585	2301	0
V/C Ratio(X)	0.68	0.62	0.32				0.00	0.38	0.14	0.50	0.37	0.00
Avail Cap(c_a), veh/h	644	1706	532				0	2756	661	585	2301	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.93	0.93	0.93	0.93	0.00
Uniform Delay (d), s/veh	33.9	33.2	30.7				0.0	18.5	16.4	28.7	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.6	0.5				0.0	0.4	0.4	0.6	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	5.7	5.5				0.0	4.8	1.5	3.1	0.1	0.0
LnGrp Delay(d),s/veh	35.8	33.8	31.2				0.0	18.9	16.9	29.3	0.4	0.0
LnGrp LOS	D	C	C					B	B	C	A	
Approach Vol, veh/h		1107						1135			1135	
Approach Delay, s/veh		34.1						18.7			7.8	
Approach LOS		C						B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		81.9		28.1	33.9	48.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		65.0		35.5	17.0	* 43						
Max Q Clear Time (g_c+I1), s		2.0		16.6	8.7	13.0						
Green Ext Time (p_c), s		9.1		0.0	4.3	9.2						
Intersection Summary												
HCM 2010 Ctrl Delay			20.1									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
5: Galindo St & Laguna St/Oak St

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↕	↔	↔	↕↕		↔	↕↕	
Volume (veh/h)	9	54	8	59	28	94	26	911	85	104	823	30
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3	181.0	181.0	181.0	182.7	182.7	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	10	59	-1	64	30	0	28	990	91	113	895	32
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	5	5	5	4	4	4	4	4	4
Cap, veh/h	59	350	351	111	116	99	60	1912	175	144	1576	56
Arrive On Green	0.22	0.22	0.00	0.06	0.06	0.00	0.03	0.41	0.41	0.17	0.92	0.92
Sat Flow, veh/h	268	1581	1583	1723	1810	1538	1740	4630	425	1740	3416	122
Grp Volume(v), veh/h	69	0	-1	64	30	0	28	710	371	113	455	472
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1723	1810	1538	1740	1663	1730	1740	1736	1803
Q Serve(g_s), s	2.5	0.0	0.0	3.0	1.3	0.0	1.3	13.1	13.2	5.1	3.5	3.5
Cycle Q Clear(g_c), s	2.5	0.0	0.0	3.0	1.3	0.0	1.3	13.1	13.2	5.1	3.5	3.5
Prop In Lane	0.14		1.00	1.00		1.00	1.00		0.25	1.00		0.07
Lane Grp Cap(c), veh/h	410	0	351	111	116	99	60	1373	714	144	800	831
V/C Ratio(X)	0.17	0.00	0.00	0.58	0.26	0.00	0.47	0.52	0.52	0.79	0.57	0.57
Avail Cap(c_a), veh/h	662	0	567	241	253	215	275	1373	714	507	800	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	25.9	0.0	0.0	37.5	36.7	0.0	39.0	18.1	18.1	33.7	1.9	1.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	4.7	1.2	0.0	5.6	1.4	2.7	8.5	2.7	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	1.6	0.7	0.0	0.7	6.3	6.8	2.8	1.8	1.9
LnGrp Delay(d),s/veh	26.1	0.0	0.0	42.1	37.8	0.0	44.6	19.4	20.8	42.2	4.6	4.5
LnGrp LOS	C			D	D		D	B	C	D	A	A
Approach Vol, veh/h		68			94			1109			1040	
Approach Delay, s/veh		26.5			40.8			20.5			8.6	
Approach LOS		C			D			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	70.6		22.7	10.8	66.6		9.8				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	13.0	38.0		29.5	24.0	27.0		11.5				
Max Q Clear Time (g_c+I1), s	3.3	5.5		4.5	7.1	15.2		5.0				
Green Ext Time (p_c), s	0.0	18.3		0.3	0.2	9.0		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			16.2									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

AM Peak Hour
12/10/2013

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↵	↑↑↑	↑↑↵		↵	↶		
Volume (veh/h)	97	1068	1287	40	44	114		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	184.5	184.5	186.3	190.0	184.5	184.5		
Adj Flow Rate, veh/h	105	1161	1399	31	48	47		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	286	4104	3013	67	116	104		
Arrive On Green	0.16	0.81	0.59	0.59	0.07	0.07		
Sat Flow, veh/h	1757	5202	5281	113	1757	1568		
Grp Volume(v), veh/h	105	1161	927	503	48	47		
Grp Sat Flow(s),veh/h/ln	1757	1679	1695	1837	1757	1568		
Q Serve(g_s), s	4.2	4.4	12.3	12.3	2.1	2.3		
Cycle Q Clear(g_c), s	4.2	4.4	12.3	12.3	2.1	2.3		
Prop In Lane	1.00			0.06	1.00	1.00		
Lane Grp Cap(c), veh/h	286	4104	1998	1082	116	104		
V/C Ratio(X)	0.37	0.28	0.46	0.46	0.41	0.45		
Avail Cap(c_a), veh/h	286	4104	1998	1082	782	698		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	29.7	1.8	9.3	9.3	35.8	35.9		
Incr Delay (d2), s/veh	0.8	0.2	0.8	1.4	2.3	3.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.1	2.0	5.9	6.6	1.1	1.1		
LnGrp Delay(d),s/veh	30.5	1.9	10.0	10.7	38.1	38.9		
LnGrp LOS	C	A	B	B	D	D		
Approach Vol, veh/h		1266	1430		95			
Approach Delay, s/veh		4.3	10.3		38.5			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	48.2	52.0		9.8		100.2		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	13.0	* 47		35.5		65.0		
Max Q Clear Time (g_c+I1), s	6.2	14.3		4.3		6.4		
Green Ext Time (p_c), s	4.2	12.8		0.3		12.1		
Intersection Summary								
HCM 2010 Ctrl Delay			8.5					
HCM 2010 LOS			A					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
 7: Oakland Ave/Driveway & Clayton Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	568	131	452	1367	9	99	20	143	9	45	12
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.93		0.92	0.93		0.91
Parking Bus, 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
Adj Sat Flow, veh/h/ln	179.2	179.2	190.0	188.1	188.1	190.0	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	20	638	54	508	1536	10	111	22	53	10	51	13
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	1	1	1	2	2	2	2	2	2
Cap, veh/h	46	1511	127	626	1759	11	433	566	442	451	425	108
Arrive On Green	0.03	0.33	0.33	0.18	0.48	0.48	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1707	4579	384	3476	3640	24	1238	1863	1455	1224	1400	357
Grp Volume(v), veh/h	20	453	239	508	754	792	111	22	53	10	0	64
Grp Sat Flow(s),veh/h/ln	1707	1631	1700	1738	1787	1876	1238	1863	1455	1224	0	1757
Q Serve(g_s), s	0.9	8.7	8.9	11.3	30.4	30.5	5.7	0.7	2.1	0.5	0.0	2.1
Cycle Q Clear(g_c), s	0.9	8.7	8.9	11.3	30.4	30.5	7.9	0.7	2.1	1.1	0.0	2.1
Prop In Lane	1.00		0.23	1.00		0.01	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	46	1077	561	626	864	907	433	566	442	451	0	534
V/C Ratio(X)	0.44	0.42	0.43	0.81	0.87	0.87	0.26	0.04	0.12	0.02	0.00	0.12
Avail Cap(c_a), veh/h	169	1077	561	905	864	907	486	646	505	504	0	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	21.0	21.1	31.7	18.6	18.6	23.1	19.8	20.3	20.2	0.0	20.3
Incr Delay (d2), s/veh	6.4	0.3	0.5	3.7	11.8	11.4	0.3	0.0	0.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.9	4.2	5.8	17.7	18.5	2.0	0.3	0.9	0.2	0.0	1.0
LnGrp Delay(d),s/veh	45.1	21.3	21.6	35.4	30.5	30.0	23.4	19.8	20.4	20.2	0.0	20.4
LnGrp LOS	D	C	C	D	C	C	C	B	C	C		C
Approach Vol, veh/h		712			2054			186			74	
Approach Delay, s/veh		22.1			31.5			22.1			20.4	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	44.0		29.5	19.5	31.6		29.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	39.0		28.0	21.0	26.0		28.0				
Max Q Clear Time (g_c+I1), s	2.9	32.5		4.1	13.3	10.9		9.9				
Green Ext Time (p_c), s	0.0	5.7		1.0	1.2	12.1		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			28.4									
HCM 2010 LOS			C									

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	30	984	30	0	922
Conflicting Peds, #/hr	0	0	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	4	4	4	4
Mvmt Flow	0	33	1070	33	0	1002

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1487	557	0	0	1102	0
Stage 1	1086	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	5.38	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	3.14	-
Pot Cap-1 Maneuver	178	410	-	-	344	-
Stage 1	217	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	177	408	-	-	342	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	217	-	-	-	-	-
Stage 2	593	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6		
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	408	342	-
HCM Lane V/C Ratio	-	-	0.08	-	-
HCM Control Delay (s)	-	-	14.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

PM Peak Hour
 12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑↑		↙↘	↑↑↑	
Volume (veh/h)	40	40	17	0	0	0	0	1191	72	180	1347	35
Number	7	4	14					1	6	16	5	2
Initial Q (Qb), veh	0	0	0					0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94					1.00	1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00					1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	190.0	190.0					0.0	186.3	190.0	188.1	188.1
Adj Flow Rate, veh/h	42	42	10					0	1254	0	189	1418
Adj No. of Lanes	0	1	0					0	3	0	2	3
Peak Hour Factor	0.95	0.95	0.95					0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0					0	2	2	1	1
Cap, veh/h	73	73	17					0	3587	0	267	4231
Arrive On Green	0.09	0.09	0.09					0.00	0.71	0.00	0.08	0.82
Sat Flow, veh/h	809	809	193					0	5421	0	3476	5161
Grp Volume(v), veh/h	94	0	0					0	1254	0	189	941
Grp Sat Flow(s),veh/h/ln	1810	0	0					0	1695	0	1738	1712
Q Serve(g_s), s	5.3	0.0	0.0					0.0	10.2	0.0	5.6	7.2
Cycle Q Clear(g_c), s	5.3	0.0	0.0					0.0	10.2	0.0	5.6	7.2
Prop In Lane	0.45		0.11					0.00		0.00	1.00	0.06
Lane Grp Cap(c), veh/h	164	0	0					0	3587	0	267	2807
V/C Ratio(X)	0.57	0.00	0.00					0.00	0.35	0.00	0.71	0.34
Avail Cap(c_a), veh/h	401	0	0					0	3587	0	852	2807
HCM Platoon Ratio	1.00	1.00	1.00					1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00					0.00	0.76	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	0.0	0.0					0.0	6.1	0.0	47.8	2.4
Incr Delay (d2), s/veh	3.1	0.0	0.0					0.0	0.2	0.0	3.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0					0.0	4.8	0.0	2.8	3.5
LnGrp Delay(d),s/veh	49.4	0.0	0.0					0.0	6.3	0.0	51.2	2.7
LnGrp LOS	D							A			D	A
Approach Vol, veh/h		94						1254			1640	
Approach Delay, s/veh		49.4						6.3			8.4	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		105.9		14.1	12.2	93.7						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		87.0		23.5	26.0	57.0						
Max Q Clear Time (g_c+I1), s		9.2		7.3	7.6	12.2						
Green Ext Time (p_c), s		46.3		0.0	0.6	32.4						
Intersection Summary												
HCM 2010 Ctrl Delay			8.8									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	91	634	124	103	400	195	144	975	241	225	1018	43
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	188.1	188.1	188.1	188.1	188.1	190.0	188.1	188.1	188.1
Adj Flow Rate, veh/h	93	647	119	105	408	136	147	995	234	230	1039	33
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	305	792	145	204	951	414	177	1552	364	260	1506	668
Arrive On Green	0.05	0.26	0.26	0.05	0.27	0.27	0.10	0.38	0.38	0.29	0.84	0.84
Sat Flow, veh/h	1792	2993	550	1792	3574	1556	1792	4136	971	1792	3574	1584
Grp Volume(v), veh/h	93	386	380	105	408	136	147	823	406	230	1039	33
Grp Sat Flow(s),veh/h/ln	1792	1787	1756	1792	1787	1556	1792	1712	1683	1792	1787	1584
Q Serve(g_s), s	4.2	22.6	22.7	4.7	10.5	7.8	9.0	22.1	22.1	13.7	12.2	0.4
Cycle Q Clear(g_c), s	4.2	22.6	22.7	4.7	10.5	7.8	9.0	22.1	22.1	13.7	12.2	0.4
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	305	473	465	204	951	414	177	1285	632	260	1506	668
V/C Ratio(X)	0.30	0.82	0.82	0.51	0.43	0.33	0.83	0.64	0.64	0.89	0.69	0.05
Avail Cap(c_a), veh/h	308	529	520	204	1058	460	257	1285	632	450	1506	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81	0.95	0.95	0.95
Uniform Delay (d), s/veh	28.0	38.5	38.5	30.2	33.9	32.9	49.3	28.7	28.7	38.7	6.0	5.1
Incr Delay (d2), s/veh	0.6	8.8	9.1	2.2	0.3	0.5	11.6	2.0	4.1	9.9	2.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	12.3	12.2	2.5	5.3	3.4	5.0	10.8	11.0	7.4	6.1	0.2
LnGrp Delay(d),s/veh	28.5	47.3	47.6	32.4	34.2	33.4	60.9	30.7	32.7	48.6	8.5	5.2
LnGrp LOS	C	D	D	C	C	C	E	C	C	D	A	A
Approach Vol, veh/h		859			649			1376			1302	
Approach Delay, s/veh		45.4			33.7			34.5			15.5	
Approach LOS		D			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	34.5	15.0	60.5	9.8	34.7	20.2	55.3				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	6.0	33.0	16.0	47.0	6.0	33.0	28.0	35.0				
Max Q Clear Time (g_c+I1), s	6.7	24.7	11.0	14.2	6.2	12.5	15.7	24.1				
Green Ext Time (p_c), s	0.0	4.8	0.2	22.2	0.0	8.4	0.5	9.2				
Intersection Summary												
HCM 2010 Ctrl Delay			30.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	196	732	397	198	953	0	0	1176	60
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				188.1	188.1	188.1	188.1	188.1	0.0	190.0	188.1	188.1
Adj Flow Rate, veh/h				209	779	245	211	1014	0	0	1251	51
Adj No. of Lanes				1	3	1	2	2	0	0	3	1
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	1	1	1	1	0	1	1	1
Cap, veh/h				379	1086	327	292	2494	0	0	2956	902
Arrive On Green				0.21	0.21	0.21	0.08	0.70	0.00	0.00	1.00	1.00
Sat Flow, veh/h				1792	5136	1547	3476	3668	0	0	5305	1567
Grp Volume(v), veh/h				209	779	245	211	1014	0	0	1251	51
Grp Sat Flow(s),veh/h/ln				1792	1712	1547	1738	1787	0	0	1712	1567
Q Serve(g_s), s				10.9	14.8	15.5	6.2	12.5	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				10.9	14.8	15.5	6.2	12.5	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				379	1086	327	292	2494	0	0	2956	902
V/C Ratio(X)				0.55	0.72	0.75	0.72	0.41	0.00	0.00	0.42	0.06
Avail Cap(c_a), veh/h				642	1841	554	797	2494	0	0	2956	902
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.88	0.88	0.00	0.00	0.67	0.67
Uniform Delay (d), s/veh				36.8	38.3	38.6	46.7	6.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				1.3	0.9	3.4	3.0	0.4	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	7.1	6.9	3.1	6.2	0.0	0.0	0.1	0.0
LnGrp Delay(d),s/veh				38.1	39.2	42.1	49.7	7.1	0.0	0.0	0.3	0.1
LnGrp LOS				D	D	D	D	A			A	A
Approach Vol, veh/h					1233			1225			1302	
Approach Delay, s/veh					39.6			14.5			0.3	
Approach LOS					D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	12.8	80.6		26.6		93.4						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	24.0	45.0		37.5		73.0						
Max Q Clear Time (g_c+1), s	8.2	2.0		17.5		14.5						
Green Ext Time (p_c), s	0.6	27.0		4.6		32.1						
Intersection Summary												
HCM 2010 Ctrl Delay				17.8								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

PM Peak Hour
 12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↑					↑↑↑↑	↑	↑↑	↑↑	
Volume (veh/h)	143	1226	270	0	0	0	0	1011	188	580	805	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3				0.0	188.1	188.1	188.1	188.1	0.0
Adj Flow Rate, veh/h	152	1304	241				0	1076	179	617	856	0
Adj No. of Lanes	0	4	1				0	4	1	2	2	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	1	1	1	1	0
Cap, veh/h	170	1574	396				0	2399	569	828	2335	0
Arrive On Green	0.26	0.26	0.26				0.00	0.37	0.37	0.48	1.00	0.00
Sat Flow, veh/h	648	5989	1507				0	6735	1534	3476	3668	0
Grp Volume(v), veh/h	430	1026	241				0	1076	179	617	856	0
Grp Sat Flow(s),veh/h/ln	1830	1602	1507				0	1618	1534	1738	1787	0
Q Serve(g_s), s	25.6	22.7	15.9				0.0	14.2	9.4	16.3	0.0	0.0
Cycle Q Clear(g_c), s	25.6	22.7	15.9				0.0	14.2	9.4	16.3	0.0	0.0
Prop In Lane	0.35		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	481	1263	396				0	2399	569	828	2335	0
V/C Ratio(X)	0.89	0.81	0.61				0.00	0.45	0.31	0.74	0.37	0.00
Avail Cap(c_a), veh/h	590	1548	486				0	2399	569	828	2335	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.92	0.92	0.88	0.88	0.00
Uniform Delay (d), s/veh	40.2	39.1	36.6				0.0	26.9	25.4	26.8	0.0	0.0
Incr Delay (d2), s/veh	13.9	2.8	1.5				0.0	0.6	1.3	3.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.7	10.3	13.3				0.0	6.4	4.2	8.1	0.1	0.0
LnGrp Delay(d),s/veh	54.1	41.9	38.1				0.0	27.5	26.7	30.1	0.4	0.0
LnGrp LOS	D	D	D					C	C	C	A	
Approach Vol, veh/h		1697						1255			1473	
Approach Delay, s/veh		44.5						27.4			12.8	
Approach LOS		D						C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		85.7		34.3	38.7	47.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		74.0		36.5	27.0	* 42						
Max Q Clear Time (g_c+I1), s		2.0		27.6	18.3	16.2						
Green Ext Time (p_c), s		11.7		0.0	5.2	9.5						
Intersection Summary												
HCM 2010 Ctrl Delay			29.1									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 5: Galindo St & Laguna St/Oak St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↗	↖	↖	↗	↖	↕		↖	↕	
Volume (veh/h)	35	34	14	107	40	211	37	966	71	52	923	50
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		0.96
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	184.5	184.5	188.1	188.1	188.1	186.3	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	38	37	-1	116	43	0	40	1050	76	57	1003	53
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	1	1	2	2	2	1	1	1
Cap, veh/h	132	129	227	152	160	136	73	2558	185	88	1854	98
Arrive On Green	0.14	0.14	0.00	0.08	0.08	0.00	0.04	0.53	0.53	0.10	1.00	1.00
Sat Flow, veh/h	912	888	1568	1792	1881	1599	1774	4825	349	1792	3445	182
Grp Volume(v), veh/h	75	0	-1	116	43	0	40	737	389	57	520	536
Grp Sat Flow(s),veh/h/ln	1799	0	1568	1792	1881	1599	1774	1695	1783	1792	1787	1840
Q Serve(g_s), s	3.5	0.0	0.0	6.0	2.0	0.0	2.1	12.3	12.4	2.9	0.0	0.0
Cycle Q Clear(g_c), s	3.5	0.0	0.0	6.0	2.0	0.0	2.1	12.3	12.4	2.9	0.0	0.0
Prop In Lane	0.51		1.00	1.00		1.00	1.00		0.20	1.00		0.10
Lane Grp Cap(c), veh/h	261	0	227	152	160	136	73	1797	945	88	962	990
V/C Ratio(X)	0.29	0.00	0.00	0.76	0.27	0.00	0.55	0.41	0.41	0.64	0.54	0.54
Avail Cap(c_a), veh/h	544	0	474	218	229	195	226	1797	945	228	962	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	36.0	0.0	0.0	42.2	40.4	0.0	44.3	13.3	13.3	41.7	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	9.3	0.9	0.0	6.2	0.7	1.3	7.0	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	3.4	1.1	0.0	1.1	5.9	6.4	1.6	0.5	0.5
LnGrp Delay(d),s/veh	36.6	0.0	0.0	51.5	41.3	0.0	50.5	14.0	14.6	48.7	2.0	1.9
LnGrp LOS	D			D	D		D	B	B	D	A	A
Approach Vol, veh/h		74			159			1166			1113	
Approach Delay, s/veh		37.1			48.8			15.5			4.4	
Approach LOS		D			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	81.4		18.2	8.7	80.7		12.5				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	12.0	50.0		28.5	12.0	50.0		11.5				
Max Q Clear Time (g_c+1), s	4.1	2.0		5.5	4.9	14.4		8.0				
Green Ext Time (p_c), s	0.0	25.0		0.3	0.0	21.3		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			13.3									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

PM Peak Hour
12/10/2013

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↵	↗↗↗	↗↗↗		↵	↗		
Volume (veh/h)	177	1654	1037	68	138	213		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	188.1	188.1	188.1	190.0	188.1	188.1		
Adj Flow Rate, veh/h	197	1838	1152	63	153	88		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	364	4073	2684	147	197	176		
Arrive On Green	0.20	0.79	0.54	0.54	0.11	0.11		
Sat Flow, veh/h	1792	5305	5149	272	1792	1599		
Grp Volume(v), veh/h	197	1838	792	423	153	88		
Grp Sat Flow(s),veh/h/ln	1792	1712	1712	1828	1792	1599		
Q Serve(g_s), s	9.7	11.3	13.6	13.7	8.2	5.1		
Cycle Q Clear(g_c), s	9.7	11.3	13.6	13.7	8.2	5.1		
Prop In Lane	1.00			0.15	1.00	1.00		
Lane Grp Cap(c), veh/h	364	4073	1845	985	197	176		
V/C Ratio(X)	0.54	0.45	0.43	0.43	0.77	0.50		
Avail Cap(c_a), veh/h	364	4073	1845	985	592	528		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	35.1	3.3	13.6	13.6	42.6	41.2		
Incr Delay (d2), s/veh	1.6	0.4	0.7	1.4	6.4	2.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.9	5.4	6.6	7.2	4.4	2.4		
LnGrp Delay(d),s/veh	36.7	3.6	14.3	15.0	48.9	43.4		
LnGrp LOS	D	A	B	B	D	D		
Approach Vol, veh/h		2035	1215		241			
Approach Delay, s/veh		6.8	14.6		46.9			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	46.7	58.0		15.3		104.7		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	20.0	* 53		32.5		78.0		
Max Q Clear Time (g_c+I1), s	11.7	15.7		10.2		13.3		
Green Ext Time (p_c), s	6.9	10.7		0.7		27.8		
Intersection Summary								
HCM 2010 Ctrl Delay			12.3					
HCM 2010 LOS			B					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
 7: Oakland Ave/Driveway & Clayton Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	1455	134	202	740	35	190	49	422	63	42	45
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.95		0.93	0.97		0.95
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	184.5	184.5	190.0	190.0	190.0	190.0	190.0	190.0	190.0
Adj Flow Rate, veh/h	92	1532	65	213	779	34	200	52	265	66	44	31
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	0	0	0
Cap, veh/h	120	1800	76	544	1536	67	432	569	452	380	303	214
Arrive On Green	0.07	0.36	0.36	0.16	0.45	0.45	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1792	5044	214	3408	3417	149	1284	1900	1508	1043	1013	713
Grp Volume(v), veh/h	92	1040	557	213	399	414	200	52	265	66	0	75
Grp Sat Flow(s),veh/h/ln	1792	1712	1835	1704	1752	1813	1284	1900	1508	1043	0	1726
Q Serve(g_s), s	4.1	22.9	22.9	4.6	13.2	13.3	11.0	1.6	12.2	4.0	0.0	2.6
Cycle Q Clear(g_c), s	4.1	22.9	22.9	4.6	13.2	13.3	13.6	1.6	12.2	5.6	0.0	2.6
Prop In Lane	1.00		0.12	1.00		0.08	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	120	1222	655	544	788	815	432	569	452	380	0	517
V/C Ratio(X)	0.77	0.85	0.85	0.39	0.51	0.51	0.46	0.09	0.59	0.17	0.00	0.15
Avail Cap(c_a), veh/h	286	1344	720	544	788	815	520	699	555	452	0	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	24.2	24.2	30.7	16.0	16.0	25.9	20.6	24.3	22.6	0.0	20.9
Incr Delay (d2), s/veh	9.9	5.0	9.0	2.1	2.3	2.3	0.8	0.1	1.2	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	11.5	13.1	2.3	6.8	7.1	4.0	0.8	5.2	1.2	0.0	1.2
LnGrp Delay(d),s/veh	47.3	29.3	33.2	32.8	18.3	18.2	26.7	20.6	25.5	22.8	0.0	21.0
LnGrp LOS	D	C	C	C	B	B	C	C	C	C		C
Approach Vol, veh/h		1689			1026			517				141
Approach Delay, s/veh		31.5			21.3			25.4				21.8
Approach LOS		C			C			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	50.1		29.4	18.0	42.6		29.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	13.0	32.0		30.0	13.0	32.0		30.0				
Max Q Clear Time (g_c+I1), s	6.1	15.3		7.6	6.6	24.9		15.6				
Green Ext Time (p_c), s	0.1	13.5		2.7	0.4	4.2		2.4				
Intersection Summary												
HCM 2010 Ctrl Delay				27.1								
HCM 2010 LOS				C								

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	39	1027	18	0	1088
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	42	1116	20	0	1183

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	1599	577	0	0	1136	0
Stage 1	1126	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	5.32	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	3.11	-
Pot Cap-1 Maneuver	156	398	-	-	339	-
Stage 1	206	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	155	395	-	-	336	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	206	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	395	336	-
HCM Lane V/C Ratio	-	-	0.107	-	-
HCM Control Delay (s)	-	-	15.2	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↑↑↑		↔	↑↑↑	
Volume (veh/h)	14	16	6	0	0	0	0	1347	72	68	736	7
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	184.5	190.0				0.0	184.5	190.0	181.0	181.0	190.0
Adj Flow Rate, veh/h	16	18	1				0	1497	0	76	818	8
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	3	0				0	3	3	5	5	5
Cap, veh/h	45	51	3				0	3764	0	183	4259	42
Arrive On Green	0.06	0.06	0.06				0.00	0.75	0.00	0.05	0.84	0.84
Sat Flow, veh/h	819	922	51				0	5368	0	3343	5044	49
Grp Volume(v), veh/h	35	0	0				0	1497	0	76	534	292
Grp Sat Flow(s),veh/h/ln	1792	0	0				0	1679	0	1672	1647	1800
Q Serve(g_s), s	1.8	0.0	0.0				0.0	10.1	0.0	2.1	2.9	2.9
Cycle Q Clear(g_c), s	1.8	0.0	0.0				0.0	10.1	0.0	2.1	2.9	2.9
Prop In Lane	0.46		0.03				0.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	99	0	0				0	3764	0	183	2781	1520
V/C Ratio(X)	0.35	0.00	0.00				0.00	0.40	0.00	0.42	0.19	0.19
Avail Cap(c_a), veh/h	388	0	0				0	3764	0	741	2781	1520
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.80	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	0.0	0.0				0.0	4.3	0.0	43.3	1.4	1.4
Incr Delay (d2), s/veh	2.1	0.0	0.0				0.0	0.3	0.0	1.5	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0				0.0	4.7	0.0	1.0	1.3	1.5
LnGrp Delay(d),s/veh	45.2	0.0	0.0				0.0	4.6	0.0	44.8	1.5	1.7
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		35						1497			902	
Approach Delay, s/veh		45.2						4.6			5.2	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		100.3		9.7	9.2	91.1						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		80.0		20.5	21.0	55.0						
Max Q Clear Time (g_c+1), s		4.9		3.8	4.1	12.1						
Green Ext Time (p_c), s		36.0		0.0	0.2	26.9						
Intersection Summary												
HCM 2010 Ctrl Delay			5.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
2: Galindo St & Willow Pass Rd

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	233	49	162	651	232	95	1101	104	79	596	21
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	188.1	188.1	188.1	184.5	184.5	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	53	253	48	176	708	172	103	1197	113	86	648	23
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	68	703	131	159	1026	448	133	1920	181	111	1975	70
Arrive On Green	0.04	0.24	0.24	0.09	0.29	0.29	0.08	0.41	0.41	0.02	0.13	0.13
Sat Flow, veh/h	1774	2971	555	1792	3574	1561	1757	4674	441	1740	4945	175
Grp Volume(v), veh/h	53	149	152	176	708	172	103	860	450	86	435	236
Grp Sat Flow(s),veh/h/ln	1774	1770	1756	1792	1787	1561	1757	1679	1758	1740	1663	1795
Q Serve(g_s), s	2.7	6.3	6.5	8.0	15.9	8.0	5.2	18.3	18.3	4.4	10.7	10.7
Cycle Q Clear(g_c), s	2.7	6.3	6.5	8.0	15.9	8.0	5.2	18.3	18.3	4.4	10.7	10.7
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.25	1.00		0.10
Lane Grp Cap(c), veh/h	68	419	416	159	1026	448	133	1379	722	111	1328	717
V/C Ratio(X)	0.78	0.36	0.37	1.11	0.69	0.38	0.78	0.62	0.62	0.77	0.33	0.33
Avail Cap(c_a), veh/h	158	648	644	159	1309	572	371	1379	722	270	1328	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	0.99	0.99	0.99
Uniform Delay (d), s/veh	42.9	28.7	28.7	41.0	28.5	25.7	40.9	21.0	21.0	43.4	28.1	28.2
Incr Delay (d2), s/veh	17.4	0.5	0.5	102.6	1.1	0.5	7.6	1.7	3.2	10.6	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.2	3.2	8.5	7.9	3.5	2.8	8.8	9.5	2.5	5.0	5.6
LnGrp Delay(d),s/veh	60.3	29.2	29.3	143.6	29.6	26.3	48.5	22.7	24.3	54.0	28.8	29.4
LnGrp LOS	E	C	C	F	C	C	D	C	C	D	C	C
Approach Vol, veh/h		354			1056			1413			757	
Approach Delay, s/veh		33.9			48.1			25.1			31.8	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	26.3	10.8	60.9	7.4	30.9	9.8	61.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	8.0	33.0	19.0	32.0	8.0	33.0	14.0	37.0				
Max Q Clear Time (g_c+I1), s	10.0	8.5	7.2	12.7	4.7	17.9	6.4	20.3				
Green Ext Time (p_c), s	0.0	8.1	0.2	13.1	0.0	6.5	0.1	11.8				
Intersection Summary												
HCM 2010 Ctrl Delay			34.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

AM Peak Hour
 12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑	↑	↑	↑↑			↑↑↑	
Volume (veh/h)	0	0	0	249	1095	450	166	884	0	0	740	76
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	184.5	184.5	182.7	182.7	0.0	0.0	181.0	190.0
Adj Flow Rate, veh/h				259	1141	295	173	921	0	0	771	50
Adj No. of Lanes				0	3	1	1	2	0	0	3	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	4	4	0	0	5	5
Cap, veh/h				272	1293	465	206	2096	0	0	2117	137
Arrive On Green				0.30	0.30	0.30	0.12	0.60	0.00	0.00	0.89	0.89
Sat Flow, veh/h				898	4259	1533	1740	3563	0	0	4904	306
Grp Volume(v), veh/h				519	881	295	173	921	0	0	535	286
Grp Sat Flow(s),veh/h/ln				1800	1679	1533	1740	1736	0	0	1647	1755
Q Serve(g_s), s				29.0	25.4	17.0	10.0	14.7	0.0	0.0	2.6	2.7
Cycle Q Clear(g_c), s				29.0	25.4	17.0	10.0	14.7	0.0	0.0	2.6	2.7
Prop In Lane				0.50		1.00	1.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h				546	1019	465	206	2096	0	0	1470	783
V/C Ratio(X)				0.95	0.86	0.63	0.84	0.44	0.00	0.00	0.36	0.37
Avail Cap(c_a), veh/h				675	1259	575	339	2096	0	0	1470	783
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.89	0.89	0.00	0.00	0.82	0.82
Uniform Delay (d), s/veh				35.0	33.8	30.8	44.3	11.0	0.0	0.0	3.2	3.2
Incr Delay (d2), s/veh				20.9	5.5	1.6	8.4	0.6	0.0	0.0	0.6	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				17.6	12.5	7.4	5.3	7.2	0.0	0.0	1.2	1.4
LnGrp Delay(d),s/veh				55.9	39.2	32.4	52.6	11.6	0.0	0.0	3.8	4.3
LnGrp LOS				E	D	C	D	B			A	A
Approach Vol, veh/h					1695			1094			821	
Approach Delay, s/veh					43.1			18.0			3.9	
Approach LOS					D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	16.2	58.2		35.7		74.3						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	20.0	38.0		38.5		62.0						
Max Q Clear Time (g_c+I1), s	12.0	4.7		31.0		16.7						
Green Ext Time (p_c), s	0.3	16.3		0.0		18.5						
Intersection Summary												
HCM 2010 Ctrl Delay					26.6							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑					↑↑↑	↑	↑↑	↑↑↑	
Volume (veh/h)	134	731	153	0	0	0	0	908	111	254	733	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	182.7	182.7				0.0	182.7	182.7	182.7	182.7	0.0
Adj Flow Rate, veh/h	154	840	113				0	1044	91	292	843	0
Adj No. of Lanes	0	4	1				0	3	1	2	3	0
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	225	1335	353				0	2187	661	585	3306	0
Arrive On Green	0.24	0.24	0.24				0.00	0.44	0.44	0.35	1.00	0.00
Sat Flow, veh/h	937	5556	1469				0	5152	1507	3375	5152	0
Grp Volume(v), veh/h	293	701	113				0	1044	91	292	843	0
Grp Sat Flow(s),veh/h/ln	1780	1571	1469				0	1663	1507	1688	1663	0
Q Serve(g_s), s	14.6	13.0	6.2				0.0	14.6	3.5	6.7	0.0	0.0
Cycle Q Clear(g_c), s	14.6	13.0	6.2				0.0	14.6	3.5	6.7	0.0	0.0
Prop In Lane	0.53		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	428	1132	353				0	2187	661	585	3306	0
V/C Ratio(X)	0.68	0.62	0.32				0.00	0.48	0.14	0.50	0.25	0.00
Avail Cap(c_a), veh/h	644	1706	532				0	2187	661	585	3306	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.93	0.93	0.89	0.89	0.00
Uniform Delay (d), s/veh	33.9	33.2	30.7				0.0	19.5	16.4	28.7	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.6	0.5				0.0	0.7	0.4	0.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	5.7	5.5				0.0	6.8	1.5	3.1	0.1	0.0
LnGrp Delay(d),s/veh	35.8	33.8	31.2				0.0	20.2	16.9	29.3	0.2	0.0
LnGrp LOS	D	C	C					C	B	C	A	
Approach Vol, veh/h		1107						1135			1135	
Approach Delay, s/veh		34.1						20.0			7.6	
Approach LOS		C						B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		81.9		28.1	33.9	48.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		65.0		35.5	17.0	* 43						
Max Q Clear Time (g_c+1), s		2.0		16.6	8.7	16.6						
Green Ext Time (p_c), s		9.0		0.0	4.3	8.9						
Intersection Summary												
HCM 2010 Ctrl Delay			20.5									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 5: Galindo St & Laguna St/Oak St

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	54	8	59	28	94	26	911	85	104	823	30
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3	181.0	181.0	181.0	182.7	182.7	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	10	59	-1	64	30	0	28	990	91	113	895	32
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	5	5	5	4	4	4	4	4	4
Cap, veh/h	59	350	351	111	116	99	60	1912	175	144	1576	56
Arrive On Green	0.22	0.22	0.00	0.06	0.06	0.00	0.03	0.41	0.41	0.17	0.92	0.92
Sat Flow, veh/h	268	1581	1583	1723	1810	1538	1740	4630	425	1740	3416	122
Grp Volume(v), veh/h	69	0	-1	64	30	0	28	710	371	113	455	472
Grp Sat Flow(s), veh/h/ln	1849	0	1583	1723	1810	1538	1740	1663	1730	1740	1736	1803
Q Serve(g_s), s	2.5	0.0	0.0	3.0	1.3	0.0	1.3	13.1	13.2	5.1	3.5	3.5
Cycle Q Clear(g_c), s	2.5	0.0	0.0	3.0	1.3	0.0	1.3	13.1	13.2	5.1	3.5	3.5
Prop In Lane	0.14		1.00	1.00		1.00	1.00		0.25	1.00		0.07
Lane Grp Cap(c), veh/h	410	0	351	111	116	99	60	1373	714	144	800	831
V/C Ratio(X)	0.17	0.00	0.00	0.58	0.26	0.00	0.47	0.52	0.52	0.79	0.57	0.57
Avail Cap(c_a), veh/h	662	0	567	241	253	215	275	1373	714	507	800	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	25.9	0.0	0.0	37.5	36.7	0.0	39.0	18.1	18.1	33.7	1.9	1.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	4.7	1.2	0.0	5.6	1.4	2.7	8.8	2.8	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	1.6	0.7	0.0	0.7	6.3	6.8	2.8	1.8	1.9
LnGrp Delay(d),s/veh	26.1	0.0	0.0	42.1	37.8	0.0	44.6	19.4	20.8	42.5	4.7	4.6
LnGrp LOS	C			D	D		D	B	C	D	A	A
Approach Vol, veh/h		68			94			1109			1040	
Approach Delay, s/veh		26.5			40.8			20.5			8.7	
Approach LOS		C			D			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	70.6		22.7	10.8	66.6		9.8				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	13.0	38.0		29.5	24.0	27.0		11.5				
Max Q Clear Time (g_c+I1), s	3.3	5.5		4.5	7.1	15.2		5.0				
Green Ext Time (p_c), s	0.0	18.3		0.3	0.2	9.0		0.1				

Intersection Summary												
HCM 2010 Ctrl Delay				16.2								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 6: Clayton Rd & Fry Way

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Volume (veh/h)	97	1068	1287	40	44	114		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	184.5	184.5	186.3	190.0	184.5	184.5		
Adj Flow Rate, veh/h	105	1161	1399	31	48	47		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	286	4104	3013	67	116	104		
Arrive On Green	0.16	0.81	0.59	0.59	0.07	0.07		
Sat Flow, veh/h	1757	5202	5281	113	1757	1568		
Grp Volume(v), veh/h	105	1161	927	503	48	47		
Grp Sat Flow(s),veh/h/ln	1757	1679	1695	1837	1757	1568		
Q Serve(g_s), s	4.2	4.4	12.3	12.3	2.1	2.3		
Cycle Q Clear(g_c), s	4.2	4.4	12.3	12.3	2.1	2.3		
Prop In Lane	1.00			0.06	1.00	1.00		
Lane Grp Cap(c), veh/h	286	4104	1998	1082	116	104		
V/C Ratio(X)	0.37	0.28	0.46	0.46	0.41	0.45		
Avail Cap(c_a), veh/h	286	4104	1998	1082	782	698		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	29.7	1.8	9.3	9.3	35.8	35.9		
Incr Delay (d2), s/veh	0.8	0.2	0.8	1.4	2.3	3.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.1	2.0	5.9	6.6	1.1	1.1		
LnGrp Delay(d),s/veh	30.5	1.9	10.0	10.7	38.1	38.9		
LnGrp LOS	C	A	B	B	D	D		
Approach Vol, veh/h		1266	1430		95			
Approach Delay, s/veh		4.3	10.3		38.5			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	48.2	52.0		9.8		100.2		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	13.0	* 47		35.5		65.0		
Max Q Clear Time (g_c+I1), s	6.2	14.3		4.3		6.4		
Green Ext Time (p_c), s	4.2	12.8		0.3		12.1		
Intersection Summary								
HCM 2010 Ctrl Delay			8.5					
HCM 2010 LOS			A					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
 7: Oakland Ave/Driveway & Clayton Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	568	131	452	1367	9	99	20	143	9	45	12
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.93		0.92	0.93		0.91
Parking Bus, 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
Adj Sat Flow, veh/h/ln	179.2	179.2	190.0	188.1	188.1	190.0	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	20	638	54	508	1536	10	111	22	53	10	51	13
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	1	1	1	2	2	2	2	2	2
Cap, veh/h	46	1511	127	626	1759	11	433	566	442	451	425	108
Arrive On Green	0.03	0.33	0.33	0.18	0.48	0.48	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1707	4579	384	3476	3640	24	1238	1863	1455	1224	1400	357
Grp Volume(v), veh/h	20	453	239	508	754	792	111	22	53	10	0	64
Grp Sat Flow(s),veh/h/ln	1707	1631	1700	1738	1787	1876	1238	1863	1455	1224	0	1757
Q Serve(g_s), s	0.9	8.7	8.9	11.3	30.4	30.5	5.7	0.7	2.1	0.5	0.0	2.1
Cycle Q Clear(g_c), s	0.9	8.7	8.9	11.3	30.4	30.5	7.9	0.7	2.1	1.1	0.0	2.1
Prop In Lane	1.00		0.23	1.00		0.01	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	46	1077	561	626	864	907	433	566	442	451	0	534
V/C Ratio(X)	0.44	0.42	0.43	0.81	0.87	0.87	0.26	0.04	0.12	0.02	0.00	0.12
Avail Cap(c_a), veh/h	169	1077	561	905	864	907	486	646	505	504	0	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	21.0	21.1	31.7	18.6	18.6	23.1	19.8	20.3	20.2	0.0	20.3
Incr Delay (d2), s/veh	6.4	0.3	0.5	3.7	11.8	11.4	0.3	0.0	0.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.9	4.2	5.8	17.7	18.5	2.0	0.3	0.9	0.2	0.0	1.0
LnGrp Delay(d),s/veh	45.1	21.3	21.6	35.4	30.5	30.0	23.4	19.8	20.4	20.2	0.0	20.4
LnGrp LOS	D	C	C	D	C	C	C	B	C	C		C
Approach Vol, veh/h		712			2054			186			74	
Approach Delay, s/veh		22.1			31.5			22.1			20.4	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	44.0		29.5	19.5	31.6		29.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	39.0		28.0	21.0	26.0		28.0				
Max Q Clear Time (g_c+I1), s	2.9	32.5		4.1	13.3	10.9		9.9				
Green Ext Time (p_c), s	0.0	5.7		1.0	1.2	12.1		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				28.4								
HCM 2010 LOS				C								

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	30	984	30	0	922
Conflicting Peds, #/hr	0	0	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	4	4	4	4
Mvmt Flow	0	33	1070	33	0	1002

Major/Minor	Minor1	Minor2	Major1	Major2
Conflicting Flow All	1487	557	0	0
Stage 1	1086	-	-	-
Stage 2	401	-	-	-
Critical Hdwy	5.7	7.1	-	5.38
Critical Hdwy Stg 1	6.6	-	-	-
Critical Hdwy Stg 2	6	-	-	-
Follow-up Hdwy	3.8	3.9	-	3.14
Pot Cap-1 Maneuver	178	410	-	344
Stage 1	217	-	-	-
Stage 2	596	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	177	408	-	342
Mov Cap-2 Maneuver	177	-	-	-
Stage 1	217	-	-	-
Stage 2	593	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6		
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	408	342	-
HCM Lane V/C Ratio	-	-	0.08	-	-
HCM Control Delay (s)	-	-	14.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↑↑↑		↔	↑↑↑	
Volume (veh/h)	40	40	17	0	0	0	0	1191	72	180	1347	35
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	190.0	190.0				0.0	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	42	42	10				0	1254	0	189	1418	33
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	2	2	1	1	1
Cap, veh/h	73	73	17				0	3587	0	267	4231	98
Arrive On Green	0.09	0.09	0.09				0.00	0.71	0.00	0.08	0.82	0.82
Sat Flow, veh/h	809	809	193				0	5421	0	3476	5161	120
Grp Volume(v), veh/h	94	0	0				0	1254	0	189	941	510
Grp Sat Flow(s),veh/h/ln	1810	0	0				0	1695	0	1738	1712	1857
Q Serve(g_s), s	5.3	0.0	0.0				0.0	10.2	0.0	5.6	7.2	7.2
Cycle Q Clear(g_c), s	5.3	0.0	0.0				0.0	10.2	0.0	5.6	7.2	7.2
Prop In Lane	0.45		0.11				0.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	164	0	0				0	3587	0	267	2807	1523
V/C Ratio(X)	0.57	0.00	0.00				0.00	0.35	0.00	0.71	0.34	0.34
Avail Cap(c_a), veh/h	401	0	0				0	3587	0	852	2807	1523
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.71	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	0.0	0.0				0.0	6.1	0.0	47.8	2.4	2.4
Incr Delay (d2), s/veh	3.1	0.0	0.0				0.0	0.2	0.0	3.4	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0				0.0	4.8	0.0	2.8	3.5	3.9
LnGrp Delay(d),s/veh	49.4	0.0	0.0				0.0	6.3	0.0	51.2	2.7	3.0
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		94						1254			1640	
Approach Delay, s/veh		49.4						6.3			8.4	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		105.9		14.1	12.2	93.7						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		87.0		23.5	26.0	57.0						
Max Q Clear Time (g_c+11), s		9.2		7.3	7.6	12.2						
Green Ext Time (p_c), s		46.3		0.0	0.6	32.4						
Intersection Summary												
HCM 2010 Ctrl Delay			8.8									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	91	634	124	103	400	195	144	975	241	225	1018	43
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	188.1	188.1	188.1	188.1	188.1	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	93	647	119	105	408	136	147	995	234	230	1039	33
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	96	792	145	96	946	412	177	1552	364	260	2155	68
Arrive On Green	0.05	0.26	0.26	0.05	0.26	0.26	0.10	0.38	0.38	0.29	0.84	0.84
Sat Flow, veh/h	1792	2993	550	1792	3574	1555	1792	4136	971	1792	5112	162
Grp Volume(v), veh/h	93	386	380	105	408	136	147	823	406	230	696	376
Grp Sat Flow(s),veh/h/ln	1792	1787	1756	1792	1787	1555	1792	1712	1683	1792	1712	1851
Q Serve(g_s), s	5.8	22.6	22.7	6.0	10.6	7.9	9.0	22.1	22.1	13.7	6.0	6.0
Cycle Q Clear(g_c), s	5.8	22.6	22.7	6.0	10.6	7.9	9.0	22.1	22.1	13.7	6.0	6.0
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.58	1.00		0.09
Lane Grp Cap(c), veh/h	96	473	465	96	946	412	177	1285	632	260	1443	780
V/C Ratio(X)	0.96	0.82	0.82	1.09	0.43	0.33	0.83	0.64	0.64	0.89	0.48	0.48
Avail Cap(c_a), veh/h	96	529	520	96	1058	460	257	1285	632	450	1443	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82	0.95	0.95	0.95
Uniform Delay (d), s/veh	52.7	38.5	38.5	52.8	34.0	33.0	49.3	28.7	28.7	38.7	5.5	5.5
Incr Delay (d2), s/veh	80.0	8.8	9.1	117.9	0.3	0.5	11.6	2.0	4.1	9.9	1.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	12.3	12.2	6.1	5.3	3.4	5.0	10.8	11.0	7.4	2.8	3.2
LnGrp Delay(d),s/veh	132.6	47.3	47.6	170.7	34.4	33.5	60.9	30.7	32.8	48.6	6.6	7.6
LnGrp LOS	F	D	D	F	C	C	E	C	C	D	A	A
Approach Vol, veh/h		859			649			1376			1302	
Approach Delay, s/veh		56.6			56.2			34.5			14.3	
Approach LOS		E			E			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	34.5	15.0	60.5	10.0	34.5	20.2	55.3				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	6.0	33.0	16.0	47.0	6.0	33.0	28.0	35.0				
Max Q Clear Time (g_c+l1), s	8.0	24.7	11.0	8.0	7.8	12.6	15.7	24.1				
Green Ext Time (p_c), s	0.0	4.8	0.2	24.3	0.0	8.4	0.5	9.1				
Intersection Summary												
HCM 2010 Ctrl Delay			36.1									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑	↑	↑	↑↑			↑↑↑	
Volume (veh/h)	0	0	0	196	732	397	198	953	0	0	1176	60
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pBT)				1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	188.1	188.1	188.1	188.1	0.0	0.0	188.1	190.0
Adj Flow Rate, veh/h				209	779	245	211	1014	0	0	1251	51
Adj No. of Lanes				0	3	1	1	2	0	0	3	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	1	1	1	1	0	0	1	1
Cap, veh/h				239	962	354	246	2440	0	0	2568	105
Arrive On Green				0.23	0.23	0.23	0.14	0.68	0.00	0.00	1.00	1.00
Sat Flow, veh/h				1046	4207	1550	1792	3668	0	0	5227	206
Grp Volume(v), veh/h				366	622	245	211	1014	0	0	847	455
Grp Sat Flow(s),veh/h/ln				1829	1712	1550	1792	1787	0	0	1712	1840
Q Serve(g_s), s				20.6	18.3	15.5	12.3	13.4	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				20.6	18.3	15.5	12.3	13.4	0.0	0.0	0.0	0.0
Prop In Lane				0.57		1.00	1.00		0.00	0.00		0.11
Lane Grp Cap(c), veh/h				418	783	354	246	2440	0	0	1739	934
V/C Ratio(X)				0.87	0.80	0.69	0.86	0.42	0.00	0.00	0.49	0.49
Avail Cap(c_a), veh/h				641	1200	543	402	2440	0	0	1739	934
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.77	0.77	0.00	0.00	0.81	0.81
Uniform Delay (d), s/veh				39.8	38.9	37.8	45.1	7.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				8.5	2.1	2.4	7.8	0.4	0.0	0.0	0.8	1.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.3	8.9	6.8	6.6	6.8	0.0	0.0	0.2	0.4
LnGrp Delay(d),s/veh				48.3	41.0	40.2	52.9	7.9	0.0	0.0	0.8	1.5
LnGrp LOS				D	D	D	D	A			A	A
Approach Vol, veh/h					1233			1225			1302	
Approach Delay, s/veh					43.0			15.7			1.0	
Approach LOS					D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	18.7	72.4		28.9		91.1						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	24.0	45.0		37.5		73.0						
Max Q Clear Time (g_c+11), s	14.3	2.0		22.6		15.4						
Green Ext Time (p_c), s	0.4	26.6		0.1		31.3						
Intersection Summary												
HCM 2010 Ctrl Delay				19.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑					↑↑↑	↑	↑↑	↑↑↑	
Volume (veh/h)	143	1226	270	0	0	0	0	1011	188	580	805	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3				0.0	188.1	188.1	188.1	188.1	0.0
Adj Flow Rate, veh/h	152	1304	241				0	1076	179	617	856	0
Adj No. of Lanes	0	4	1				0	3	1	2	3	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	1	1	1	1	0
Cap, veh/h	170	1574	396				0	1904	569	828	3355	0
Arrive On Green	0.26	0.26	0.26				0.00	0.37	0.37	0.48	1.00	0.00
Sat Flow, veh/h	648	5989	1507				0	5305	1534	3476	5305	0
Grp Volume(v), veh/h	430	1026	241				0	1076	179	617	856	0
Grp Sat Flow(s),veh/h/ln	1830	1602	1507				0	1712	1534	1738	1712	0
Q Serve(g_s), s	25.6	22.7	15.9				0.0	18.9	9.4	16.3	0.0	0.0
Cycle Q Clear(g_c), s	25.6	22.7	15.9				0.0	18.9	9.4	16.3	0.0	0.0
Prop In Lane	0.35		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	481	1263	396				0	1904	569	828	3355	0
V/C Ratio(X)	0.89	0.81	0.61				0.00	0.57	0.31	0.74	0.26	0.00
Avail Cap(c_a), veh/h	590	1548	486				0	1904	569	828	3355	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.92	0.92	0.78	0.78	0.00
Uniform Delay (d), s/veh	40.2	39.1	36.6				0.0	28.4	25.4	26.8	0.0	0.0
Incr Delay (d2), s/veh	13.9	2.8	1.5				0.0	1.1	1.3	2.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.7	10.3	13.3				0.0	9.1	4.2	8.1	0.0	0.0
LnGrp Delay(d),s/veh	54.1	41.9	38.1				0.0	29.5	26.7	29.8	0.1	0.0
LnGrp LOS	D	D	D					C	C	C	A	
Approach Vol, veh/h		1697						1255			1473	
Approach Delay, s/veh		44.5						29.1			12.5	
Approach LOS		D						C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		85.7		34.3	38.7	47.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		74.0		36.5	27.0	* 42						
Max Q Clear Time (g_c+1), s		2.0		27.6	18.3	20.9						
Green Ext Time (p_c), s		11.6		0.0	5.2	8.7						

Intersection Summary

HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 5: Galindo St & Laguna St/Oak St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	34	14	107	40	211	37	966	71	52	923	50
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		0.96
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	184.5	184.5	188.1	188.1	188.1	186.3	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	38	37	-1	116	43	0	40	1050	76	57	1003	53
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	1	1	2	2	2	1	1	1
Cap, veh/h	132	129	227	152	160	136	73	2558	185	88	1854	98
Arrive On Green	0.14	0.14	0.00	0.08	0.08	0.00	0.04	0.53	0.53	0.10	1.00	1.00
Sat Flow, veh/h	912	888	1568	1792	1881	1599	1774	4825	349	1792	3445	182
Grp Volume(v), veh/h	75	0	-1	116	43	0	40	737	389	57	520	536
Grp Sat Flow(s),veh/h/ln	1799	0	1568	1792	1881	1599	1774	1695	1783	1792	1787	1840
Q Serve(g_s), s	3.5	0.0	0.0	6.0	2.0	0.0	2.1	12.3	12.4	2.9	0.0	0.0
Cycle Q Clear(g_c), s	3.5	0.0	0.0	6.0	2.0	0.0	2.1	12.3	12.4	2.9	0.0	0.0
Prop In Lane	0.51		1.00	1.00		1.00	1.00		0.20	1.00		0.10
Lane Grp Cap(c), veh/h	261	0	227	152	160	136	73	1797	945	88	962	990
V/C Ratio(X)	0.29	0.00	0.00	0.76	0.27	0.00	0.55	0.41	0.41	0.64	0.54	0.54
Avail Cap(c_a), veh/h	544	0	474	218	229	195	226	1797	945	228	962	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	36.0	0.0	0.0	42.2	40.4	0.0	44.3	13.3	13.3	41.7	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	9.3	0.9	0.0	6.2	0.7	1.3	7.3	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	3.4	1.1	0.0	1.1	5.9	6.4	1.6	0.6	0.6
LnGrp Delay(d),s/veh	36.6	0.0	0.0	51.5	41.3	0.0	50.5	14.0	14.6	49.0	2.1	2.0
LnGrp LOS	D			D	D		D	B	B	D	A	A
Approach Vol, veh/h		74			159			1166			1113	
Approach Delay, s/veh		37.1			48.8			15.5			4.5	
Approach LOS		D			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	81.4		18.2	8.7	80.7		12.5				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	12.0	50.0		28.5	12.0	50.0		11.5				
Max Q Clear Time (g_c+l1), s	4.1	2.0		5.5	4.9	14.4		8.0				
Green Ext Time (p_c), s	0.0	25.0		0.3	0.0	21.3		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				13.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

PM Peak Hour
12/10/2013

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		  	  					
Volume (veh/h)	177	1654	1037	68	138	213		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	188.1	188.1	188.1	190.0	188.1	188.1		
Adj Flow Rate, veh/h	197	1838	1152	63	153	88		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	364	4073	2684	147	197	176		
Arrive On Green	0.20	0.79	0.54	0.54	0.11	0.11		
Sat Flow, veh/h	1792	5305	5149	272	1792	1599		
Grp Volume(v), veh/h	197	1838	792	423	153	88		
Grp Sat Flow(s),veh/h/ln	1792	1712	1712	1828	1792	1599		
Q Serve(g_s), s	9.7	11.3	13.6	13.7	8.2	5.1		
Cycle Q Clear(g_c), s	9.7	11.3	13.6	13.7	8.2	5.1		
Prop In Lane	1.00			0.15	1.00	1.00		
Lane Grp Cap(c), veh/h	364	4073	1845	985	197	176		
V/C Ratio(X)	0.54	0.45	0.43	0.43	0.77	0.50		
Avail Cap(c_a), veh/h	364	4073	1845	985	592	528		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	35.1	3.3	13.6	13.6	42.6	41.2		
Incr Delay (d2), s/veh	1.6	0.4	0.7	1.4	6.4	2.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.9	5.4	6.6	7.2	4.4	2.4		
LnGrp Delay(d),s/veh	36.7	3.6	14.3	15.0	48.9	43.4		
LnGrp LOS	D	A	B	B	D	D		
Approach Vol, veh/h		2035	1215		241			
Approach Delay, s/veh		6.8	14.6		46.9			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	46.7	58.0		15.3		104.7		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	20.0	* 53		32.5		78.0		
Max Q Clear Time (g_c+I1), s	11.7	15.7		10.2		13.3		
Green Ext Time (p_c), s	6.9	10.7		0.7		27.8		
Intersection Summary								
HCM 2010 Ctrl Delay			12.3					
HCM 2010 LOS			B					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

PM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	1455	134	202	740	35	190	49	422	63	42	45
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.95		0.93	0.97		0.95
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	184.5	184.5	190.0	190.0	190.0	190.0	190.0	190.0	190.0
Adj Flow Rate, veh/h	92	1532	65	213	779	34	200	52	265	66	44	31
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	0	0	0
Cap, veh/h	120	1800	76	544	1536	67	432	569	452	380	303	214
Arrive On Green	0.07	0.36	0.36	0.16	0.45	0.45	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1792	5044	214	3408	3417	149	1284	1900	1508	1043	1013	713
Grp Volume(v), veh/h	92	1040	557	213	399	414	200	52	265	66	0	75
Grp Sat Flow(s),veh/h/ln	1792	1712	1835	1704	1752	1813	1284	1900	1508	1043	0	1726
Q Serve(g_s), s	4.1	22.9	22.9	4.6	13.2	13.3	11.0	1.6	12.2	4.0	0.0	2.6
Cycle Q Clear(g_c), s	4.1	22.9	22.9	4.6	13.2	13.3	13.6	1.6	12.2	5.6	0.0	2.6
Prop In Lane	1.00		0.12	1.00		0.08	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	120	1222	655	544	788	815	432	569	452	380	0	517
V/C Ratio(X)	0.77	0.85	0.85	0.39	0.51	0.51	0.46	0.09	0.59	0.17	0.00	0.15
Avail Cap(c_a), veh/h	286	1344	720	544	788	815	520	699	555	452	0	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	24.2	24.2	30.7	16.0	16.0	25.9	20.6	24.3	22.6	0.0	20.9
Incr Delay (d2), s/veh	9.9	5.0	9.0	2.1	2.3	2.3	0.8	0.1	1.2	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	11.5	13.1	2.3	6.8	7.1	4.0	0.8	5.2	1.2	0.0	1.2
LnGrp Delay(d),s/veh	47.3	29.3	33.2	32.8	18.3	18.2	26.7	20.6	25.5	22.8	0.0	21.0
LnGrp LOS	D	C	C	C	B	B	C	C	C	C		C
Approach Vol, veh/h		1689			1026			517			141	
Approach Delay, s/veh		31.5			21.3			25.4			21.8	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	50.1		29.4	18.0	42.6		29.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	13.0	32.0		30.0	13.0	32.0		30.0				
Max Q Clear Time (g_c+I1), s	6.1	15.3		7.6	6.6	24.9		15.6				
Green Ext Time (p_c), s	0.1	13.5		2.7	0.4	4.2		2.4				
Intersection Summary												
HCM 2010 Ctrl Delay				27.1								
HCM 2010 LOS				C								

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	39	1027	18	0	1088
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	42	1116	20	0	1183

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1599	577	0
Stage 1	1126	-	-
Stage 2	473	-	-
Critical Hdwy	5.7	7.1	5.32
Critical Hdwy Stg 1	6.6	-	-
Critical Hdwy Stg 2	6	-	-
Follow-up Hdwy	3.8	3.9	3.11
Pot Cap-1 Maneuver	156	398	339
Stage 1	206	-	-
Stage 2	547	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	155	395	336
Mov Cap-2 Maneuver	155	-	-
Stage 1	206	-	-
Stage 2	543	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	395	336	-
HCM Lane V/C Ratio	-	-	0.107	-	-
HCM Control Delay (s)	-	-	15.2	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↕↕↕		↕↕	↕↕↕	
Volume (veh/h)	14	16	6	0	0	0	0	1347	72	68	736	7
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	184.5	190.0				0.0	184.5	190.0	181.0	181.0	190.0
Adj Flow Rate, veh/h	16	18	1				0	1497	0	76	818	8
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	3	0				0	3	3	5	5	5
Cap, veh/h	48	54	3				0	3601	0	203	4161	41
Arrive On Green	0.06	0.06	0.06				0.00	0.72	0.00	0.06	0.82	0.82
Sat Flow, veh/h	819	922	51				0	5368	0	3343	5044	49
Grp Volume(v), veh/h	35	0	0				0	1497	0	76	534	292
Grp Sat Flow(s), veh/h/ln	1792	0	0				0	1679	0	1672	1647	1800
Q Serve(g_s), s	1.5	0.0	0.0				0.0	9.8	0.0	1.8	2.8	2.8
Cycle Q Clear(g_c), s	1.5	0.0	0.0				0.0	9.8	0.0	1.8	2.8	2.8
Prop In Lane	0.46		0.03				0.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	104	0	0				0	3601	0	203	2717	1485
V/C Ratio(X)	0.34	0.00	0.00				0.00	0.42	0.00	0.38	0.20	0.20
Avail Cap(c_a), veh/h	408	0	0				0	3601	0	782	2717	1485
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.74	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	0.0	0.0				0.0	4.7	0.0	36.7	1.5	1.5
Incr Delay (d2), s/veh	1.9	0.0	0.0				0.0	0.3	0.0	1.1	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0				0.0	4.5	0.0	0.9	1.2	1.4
LnGrp Delay(d),s/veh	38.6	0.0	0.0				0.0	5.0	0.0	37.8	1.6	1.8
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		35						1497			902	
Approach Delay, s/veh		38.6						5.0			4.7	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		85.8		9.2	8.9	76.9						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		67.0		18.5	19.0	44.0						
Max Q Clear Time (g_c+1), s		4.8		3.5	3.8	11.8						
Green Ext Time (p_c), s		33.1		0.0	0.2	22.3						
Intersection Summary												
HCM 2010 Ctrl Delay			5.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	233	49	162	651	232	95	1101	104	79	596	21
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	188.1	188.1	188.1	184.5	184.5	190.0	182.7	182.7	182.7
Adj Flow Rate, veh/h	53	253	48	176	708	172	103	1197	113	86	648	23
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	67	530	99	268	1084	474	134	1609	152	133	1195	532
Arrive On Green	0.04	0.18	0.18	0.15	0.30	0.30	0.08	0.34	0.34	0.15	0.69	0.69
Sat Flow, veh/h	1774	2969	554	1792	3574	1562	1757	4673	441	1740	3471	1545
Grp Volume(v), veh/h	53	149	152	176	708	172	103	860	450	86	648	23
Grp Sat Flow(s),veh/h/ln	1774	1770	1754	1792	1787	1562	1757	1679	1757	1740	1736	1545
Q Serve(g_s), s	2.2	5.7	5.9	7.0	13.0	4.7	4.3	17.0	17.1	3.5	7.0	0.3
Cycle Q Clear(g_c), s	2.2	5.7	5.9	7.0	13.0	4.7	4.3	17.0	17.1	3.5	7.0	0.3
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	67	316	313	268	1084	474	134	1156	605	133	1195	532
V/C Ratio(X)	0.79	0.47	0.49	0.66	0.65	0.36	0.77	0.74	0.74	0.65	0.54	0.04
Avail Cap(c_a), veh/h	164	656	650	285	1609	703	233	1156	605	230	1195	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77	0.99	0.99	0.99
Uniform Delay (d), s/veh	36.0	27.8	27.9	30.3	22.9	10.7	34.2	21.8	21.8	31.0	8.8	4.5
Incr Delay (d2), s/veh	18.3	1.1	1.2	5.0	0.7	0.5	6.9	3.4	6.3	5.2	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.9	2.9	3.8	6.5	2.5	2.4	8.4	9.3	1.9	3.6	0.2
LnGrp Delay(d),s/veh	54.3	28.9	29.1	35.3	23.5	11.1	41.2	25.2	28.1	36.2	10.5	4.6
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	B	A
Approach Vol, veh/h		354			1056			1413			757	
Approach Delay, s/veh		32.8			23.5			27.3			13.3	
Approach LOS		C			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.3	18.5	29.2	31.0	6.9	27.9	29.2	31.0				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	12.0	* 28	10.0	26.0	7.0	34.0	10.0	26.0				
Max Q Clear Time (g_c+l1), s	9.0	7.9	6.3	9.0	4.2	15.0	5.5	19.1				
Green Ext Time (p_c), s	1.7	1.7	0.2	4.2	0.0	6.0	0.2	4.5				

Intersection Summary

HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	249	1095	450	166	884	0	0	740	76
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				184.5	184.5	184.5	182.7	182.7	0.0	190.0	181.0	181.0
Adj Flow Rate, veh/h				259	1141	295	173	921	0	0	771	50
Adj No. of Lanes				1	3	1	2	2	0	0	3	1
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	4	4	0	5	5	5
Cap, veh/h				575	1648	502	267	1887	0	0	2026	627
Arrive On Green				0.33	0.33	0.33	0.08	0.54	0.00	0.00	0.82	0.82
Sat Flow, veh/h				1757	5036	1534	3375	3563	0	0	5103	1528
Grp Volume(v), veh/h				259	1141	295	173	921	0	0	771	50
Grp Sat Flow(s),veh/h/ln				1757	1679	1534	1688	1736	0	0	1647	1528
Q Serve(g_s), s				8.6	14.5	11.8	3.7	12.1	0.0	0.0	3.0	0.5
Cycle Q Clear(g_c), s				8.6	14.5	11.8	3.7	12.1	0.0	0.0	3.0	0.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				575	1648	502	267	1887	0	0	2026	627
V/C Ratio(X)				0.45	0.69	0.59	0.65	0.49	0.00	0.00	0.38	0.08
Avail Cap(c_a), veh/h				1086	3114	949	413	1887	0	0	2026	627
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.92	0.92	0.00	0.00	0.86	0.86
Uniform Delay (d), s/veh				19.5	21.5	20.6	32.9	10.4	0.0	0.0	4.2	3.9
Incr Delay (d2), s/veh				0.6	0.5	1.1	2.4	0.8	0.0	0.0	0.5	0.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.2	6.7	5.2	1.8	6.0	0.0	0.0	1.4	0.2
LnGrp Delay(d),s/veh				20.1	22.1	21.7	35.3	11.3	0.0	0.0	4.6	4.2
LnGrp LOS				C	C	C	D	B			A	A
Approach Vol, veh/h					1695			1094			821	
Approach Delay, s/veh					21.7			15.1			4.6	
Approach LOS					C			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.8	56.6		28.6		66.4						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	9.0	27.0		45.5		40.0						
Max Q Clear Time (g_c+I1), s	5.7	5.0		16.5		14.1						
Green Ext Time (p_c), s	0.2	13.0		7.6		14.4						
Intersection Summary												
HCM 2010 Ctrl Delay				15.8								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

AM Peak Hour
 12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	134	731	153	0	0	0	0	908	111	254	733	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	182.7	182.7				0.0	182.7	182.7	182.7	182.7	0.0
Adj Flow Rate, veh/h	154	840	113				0	1044	91	292	843	0
Adj No. of Lanes	0	4	1				0	4	1	2	2	0
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	243	1438	382				0	2348	562	631	2162	0
Arrive On Green	0.26	0.26	0.26				0.00	0.37	0.37	0.37	1.00	0.00
Sat Flow, veh/h	937	5556	1475				0	6540	1505	3375	3563	0
Grp Volume(v), veh/h	293	701	113				0	1044	91	292	843	0
Grp Sat Flow(s),veh/h/ln	1780	1571	1475				0	1571	1505	1688	1736	0
Q Serve(g_s), s	11.7	10.4	4.9				0.0	10.0	3.2	5.3	0.0	0.0
Cycle Q Clear(g_c), s	11.7	10.4	4.9				0.0	10.0	3.2	5.3	0.0	0.0
Prop In Lane	0.53		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	461	1220	382				0	2348	562	631	2162	0
V/C Ratio(X)	0.63	0.57	0.30				0.00	0.44	0.16	0.46	0.39	0.00
Avail Cap(c_a), veh/h	787	2084	652				0	2348	562	631	2162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.93	0.93	0.90	0.90	0.00
Uniform Delay (d), s/veh	26.4	25.9	23.9				0.0	18.9	16.8	22.1	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.4	0.4				0.0	0.6	0.6	0.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	4.5	4.4				0.0	4.4	1.4	2.5	0.1	0.0
LnGrp Delay(d),s/veh	27.8	26.3	24.3				0.0	19.5	17.3	22.6	0.5	0.0
LnGrp LOS	C	C	C					B	B	C	A	
Approach Vol, veh/h		1107						1135			1135	
Approach Delay, s/veh		26.5						19.3			6.2	
Approach LOS		C						B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		69.7		25.3	34.7	35.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		50.0		35.5	15.0	* 30						
Max Q Clear Time (g_c+l1), s		2.0		13.7	7.3	12.0						
Green Ext Time (p_c), s		8.9		0.0	4.1	7.5						
Intersection Summary												
HCM 2010 Ctrl Delay			17.2									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 5: Galindo St & Laguna St/Oak St

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	54	8	59	28	94	26	911	85	104	823	30
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3	181.0	181.0	181.0	182.7	182.7	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	10	59	-1	64	30	0	28	990	91	113	895	32
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	5	5	5	4	4	4	4	4	4
Cap, veh/h	61	358	359	114	120	102	61	1839	169	142	1517	54
Arrive On Green	0.23	0.23	0.00	0.07	0.07	0.00	0.03	0.40	0.40	0.16	0.89	0.89
Sat Flow, veh/h	268	1581	1583	1723	1810	1538	1740	4630	424	1740	3416	122
Grp Volume(v), veh/h	69	0	-1	64	30	0	28	710	371	113	455	472
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1723	1810	1538	1740	1663	1729	1740	1736	1803
Q Serve(g_s), s	2.4	0.0	0.0	2.8	1.2	0.0	1.2	12.9	13.0	4.9	4.9	4.9
Cycle Q Clear(g_c), s	2.4	0.0	0.0	2.8	1.2	0.0	1.2	12.9	13.0	4.9	4.9	4.9
Prop In Lane	0.14		1.00	1.00		1.00	1.00		0.25	1.00		0.07
Lane Grp Cap(c), veh/h	419	0	359	114	120	102	61	1321	687	142	771	800
V/C Ratio(X)	0.16	0.00	0.00	0.56	0.25	0.00	0.46	0.54	0.54	0.80	0.59	0.59
Avail Cap(c_a), veh/h	633	0	542	197	207	176	132	1321	687	265	771	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	24.5	0.0	0.0	35.7	34.9	0.0	37.3	18.2	18.2	32.4	2.7	2.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	4.2	1.1	0.0	5.4	1.6	3.0	9.0	3.1	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	1.5	0.7	0.0	0.7	6.2	6.8	2.7	2.6	2.6
LnGrp Delay(d),s/veh	24.7	0.0	0.0	39.9	36.0	0.0	42.7	19.8	21.3	41.4	5.8	5.7
LnGrp LOS	C			D	D		D	B	C	D	A	A
Approach Vol, veh/h		68			94			1109			1040	
Approach Delay, s/veh		25.0			38.7			20.9			9.6	
Approach LOS		C			D			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	56.2		22.4	10.4	52.5		9.7				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	6.0	35.0		27.0	12.0	29.0		9.0				
Max Q Clear Time (g_c+I1), s	3.2	6.9		4.4	6.9	15.0		4.8				
Green Ext Time (p_c), s	0.0	16.8		0.3	0.1	10.3		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			16.6									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

AM Peak Hour
12/10/2013

	↖	→	←	↗	↘	↙		
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↖↖↖	↖↖↖		↖	↖		
Volume (veh/h)	97	1068	1287	40	44	114		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	184.5	184.5	186.3	190.0	184.5	184.5		
Adj Flow Rate, veh/h	105	1161	1399	31	48	47		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	295	3925	2735	61	132	118		
Arrive On Green	0.17	0.78	0.53	0.53	0.08	0.08		
Sat Flow, veh/h	1757	5202	5281	113	1757	1568		
Grp Volume(v), veh/h	105	1161	928	502	48	47		
Grp Sat Flow(s),veh/h/ln	1757	1679	1695	1836	1757	1568		
Q Serve(g_s), s	3.5	4.3	11.5	11.5	1.7	1.9		
Cycle Q Clear(g_c), s	3.5	4.3	11.5	11.5	1.7	1.9		
Prop In Lane	1.00			0.06	1.00	1.00		
Lane Grp Cap(c), veh/h	295	3925	1813	982	132	118		
V/C Ratio(X)	0.36	0.30	0.51	0.51	0.36	0.40		
Avail Cap(c_a), veh/h	295	3925	1813	982	792	707		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	24.1	2.1	9.7	9.7	28.8	28.8		
Incr Delay (d2), s/veh	0.7	0.2	1.0	1.9	1.7	2.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.7	2.0	5.5	6.2	0.9	0.9		
LnGrp Delay(d),s/veh	24.8	2.3	10.8	11.6	30.4	31.0		
LnGrp LOS	C	A	B	B	C	C		
Approach Vol, veh/h		1266	1430		95			
Approach Delay, s/veh		4.1	11.1		30.7			
Approach LOS		A	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	40.6	40.0		9.4		80.6		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	11.0	* 35		29.5		51.0		
Max Q Clear Time (g_c+1), s	5.5	13.5		3.9		6.3		
Green Ext Time (p_c), s	3.6	10.6		0.2		11.7		
Intersection Summary								
HCM 2010 Ctrl Delay			8.6					
HCM 2010 LOS			A					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	568	131	452	1367	9	99	20	143	9	45	12
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.93		0.92	0.93		0.90
Parking Bus, 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
Adj Sat Flow, veh/h/ln	179.2	179.2	190.0	188.1	188.1	190.0	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	20	638	54	508	1536	10	111	22	53	10	51	13
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	1	1	1	2	2	2	2	2	2
Cap, veh/h	45	1600	134	616	1820	12	417	549	428	435	412	105
Arrive On Green	0.03	0.35	0.35	0.18	0.50	0.50	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1707	4580	384	3476	3640	24	1235	1863	1451	1221	1399	357
Grp Volume(v), veh/h	20	453	239	508	754	792	111	22	53	10	0	64
Grp Sat Flow(s),veh/h/ln	1707	1631	1702	1738	1787	1876	1235	1863	1451	1221	0	1756
Q Serve(g_s), s	1.0	8.8	8.9	11.8	30.6	30.7	6.1	0.7	2.2	0.5	0.0	2.2
Cycle Q Clear(g_c), s	1.0	8.8	8.9	11.8	30.6	30.7	8.3	0.7	2.2	1.2	0.0	2.2
Prop In Lane	1.00		0.23	1.00		0.01	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	45	1140	594	616	894	938	417	549	428	435	0	518
V/C Ratio(X)	0.44	0.40	0.40	0.82	0.84	0.84	0.27	0.04	0.12	0.02	0.00	0.12
Avail Cap(c_a), veh/h	122	1140	594	828	894	938	450	599	466	468	0	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.3	20.6	20.7	33.3	18.2	18.2	24.7	21.1	21.7	21.6	0.0	21.7
Incr Delay (d2), s/veh	6.5	0.2	0.4	5.1	9.6	9.2	0.3	0.0	0.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.0	4.3	6.1	17.2	18.0	2.1	0.4	0.9	0.2	0.0	1.1
LnGrp Delay(d),s/veh	46.8	20.9	21.1	38.4	27.7	27.4	25.1	21.2	21.8	21.6	0.0	21.8
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		712			2054			186				74
Approach Delay, s/veh		21.7			30.2			23.7				21.8
Approach LOS		C			C			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	47.0		29.8	19.9	34.3		29.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	6.0	42.0		27.0	20.0	28.0		27.0				
Max Q Clear Time (g_c+I1), s	3.0	32.7		4.2	13.8	10.9		10.3				
Green Ext Time (p_c), s	0.0	7.9		1.0	1.1	13.3		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				27.6								
HCM 2010 LOS				C								

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	30	984	30	0	922
Conflicting Peds, #/hr	0	0	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	4	4	4	4
Mvmt Flow	0	33	1070	33	0	1002

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1487	557	0
Stage 1	1086	-	-
Stage 2	401	-	-
Critical Hdwy	5.7	7.1	5.38
Critical Hdwy Stg 1	6.6	-	-
Critical Hdwy Stg 2	6	-	-
Follow-up Hdwy	3.8	3.9	3.14
Pot Cap-1 Maneuver	178	410	344
Stage 1	217	-	-
Stage 2	596	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	177	408	342
Mov Cap-2 Maneuver	177	-	-
Stage 1	217	-	-
Stage 2	593	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6		
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	408	342	-
HCM Lane V/C Ratio	-	-	0.08	-	-
HCM Control Delay (s)	-	-	14.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕↕		↕↕	↕↕	
Volume (veh/h)	40	40	17	0	0	0	0	1191	72	180	1347	35
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	190.0	190.0				0.0	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	42	42	10				0	1254	0	189	1418	33
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	2	2	1	1	1
Cap, veh/h	76	76	18				0	3415	0	279	4114	96
Arrive On Green	0.09	0.09	0.09				0.00	0.67	0.00	0.08	0.80	0.80
Sat Flow, veh/h	809	809	193				0	5421	0	3476	5160	120
Grp Volume(v), veh/h	94	0	0				0	1254	0	189	941	510
Grp Sat Flow(s),veh/h/ln	1811	0	0				0	1695	0	1738	1712	1857
Q Serve(g_s), s	4.4	0.0	0.0				0.0	9.4	0.0	4.6	6.7	6.7
Cycle Q Clear(g_c), s	4.4	0.0	0.0				0.0	9.4	0.0	4.6	6.7	6.7
Prop In Lane	0.45		0.11				0.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	171	0	0				0	3415	0	279	2730	1480
V/C Ratio(X)	0.55	0.00	0.00				0.00	0.37	0.00	0.68	0.34	0.34
Avail Cap(c_a), veh/h	423	0	0				0	3415	0	752	2730	1480
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.66	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	0.0				0.0	6.3	0.0	39.3	2.5	2.5
Incr Delay (d2), s/veh	2.7	0.0	0.0				0.0	0.2	0.0	2.9	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0				0.0	4.5	0.0	2.3	3.3	3.7
LnGrp Delay(d),s/veh	40.7	0.0	0.0				0.0	6.5	0.0	42.2	2.8	3.1
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		94						1254			1640	
Approach Delay, s/veh		40.7						6.5			7.5	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		87.2		12.8	11.0	76.2						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		70.0		20.5	19.0	47.0						
Max Q Clear Time (g_c+I1), s		8.7		6.4	6.6	11.4						
Green Ext Time (p_c), s		40.1		0.0	0.5	27.3						
Intersection Summary												
HCM 2010 Ctrl Delay			8.1									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
2: Galindo St & Willow Pass Rd

PM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	91	634	124	103	400	195	144	975	241	225	1018	43
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	188.1	188.1	188.1	188.1	188.1	190.0	188.1	188.1	188.1
Adj Flow Rate, veh/h	93	647	119	105	408	136	147	995	234	230	1039	33
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	119	830	152	154	1100	480	224	1169	274	263	1089	481
Arrive On Green	0.07	0.28	0.28	0.09	0.31	0.31	0.13	0.28	0.28	0.29	0.61	0.61
Sat Flow, veh/h	1792	2994	550	1792	3574	1562	1792	4133	970	1792	3574	1579
Grp Volume(v), veh/h	93	386	380	105	408	136	147	824	405	230	1039	33
Grp Sat Flow(s),veh/h/ln	1792	1787	1757	1792	1787	1562	1792	1712	1679	1792	1787	1579
Q Serve(g_s), s	4.7	18.3	18.4	5.2	8.2	3.9	7.2	20.9	21.0	11.2	24.9	0.6
Cycle Q Clear(g_c), s	4.7	18.3	18.4	5.2	8.2	3.9	7.2	20.9	21.0	11.2	24.9	0.6
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	119	495	487	154	1100	480	224	969	475	263	1089	481
V/C Ratio(X)	0.78	0.78	0.78	0.68	0.37	0.28	0.65	0.85	0.85	0.87	0.95	0.07
Avail Cap(c_a), veh/h	175	545	535	214	1206	527	273	969	475	312	1089	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	0.95	0.95	0.95
Uniform Delay (d), s/veh	42.2	30.6	30.6	40.8	24.9	10.1	38.3	31.1	31.1	31.6	17.3	7.4
Incr Delay (d2), s/veh	12.6	6.5	6.7	5.2	0.2	0.3	3.3	7.6	14.4	19.5	17.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	9.9	9.8	2.8	4.1	2.4	3.8	10.9	11.6	6.9	14.5	0.4
LnGrp Delay(d),s/veh	54.8	37.1	37.4	45.9	25.1	10.4	41.6	38.7	45.5	51.1	34.9	7.6
LnGrp LOS	D	D	D	D	C	B	D	D	D	D	C	A
Approach Vol, veh/h		859			649			1376			1302	
Approach Delay, s/veh		39.2			25.4			41.0			37.1	
Approach LOS		D			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.9	30.5	23.6	33.0	10.1	33.3	25.6	31.0				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	11.0	* 28	14.0	28.0	9.0	31.0	16.0	26.0				
Max Q Clear Time (g_c+I1), s	7.2	20.4	9.2	26.9	6.7	10.2	13.2	23.0				
Green Ext Time (p_c), s	1.3	2.9	0.5	0.7	0.0	3.4	0.3	2.1				

Intersection Summary

HCM 2010 Ctrl Delay	37.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	196	732	397	198	953	0	0	1176	60
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				188.1	188.1	188.1	188.1	188.1	0.0	190.0	188.1	188.1
Adj Flow Rate, veh/h				209	779	245	211	1014	0	0	1251	51
Adj No. of Lanes				1	3	1	2	2	0	0	3	1
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	1	1	1	1	0	1	1	1
Cap, veh/h				424	1216	367	303	2300	0	0	2597	792
Arrive On Green				0.24	0.24	0.24	0.09	0.64	0.00	0.00	1.00	1.00
Sat Flow, veh/h				1792	5136	1551	3476	3668	0	0	5305	1565
Grp Volume(v), veh/h				209	779	245	211	1014	0	0	1251	51
Grp Sat Flow(s),veh/h/ln				1792	1712	1551	1738	1787	0	0	1712	1565
Q Serve(g_s), s				8.0	10.8	11.4	4.7	11.2	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				8.0	10.8	11.4	4.7	11.2	0.0	0.0	0.0	0.0
Prop In Lane				1.00	1.00	1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				424	1216	367	303	2300	0	0	2597	792
V/C Ratio(X)				0.49	0.64	0.67	0.70	0.44	0.00	0.00	0.48	0.06
Avail Cap(c_a), veh/h				893	2559	773	526	2300	0	0	2597	792
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.74	0.74	0.00	0.00	0.46	0.46
Uniform Delay (d), s/veh				26.1	27.2	27.4	35.1	7.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				0.9	0.6	2.1	2.1	0.5	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.1	5.2	5.0	2.3	5.6	0.0	0.0	0.1	0.0
LnGrp Delay(d),s/veh				27.0	27.8	29.5	37.3	7.5	0.0	0.0	0.3	0.1
LnGrp LOS				C	C	C	D	A			A	A
Approach Vol, veh/h					1233			1225			1302	
Approach Delay, s/veh					28.0			12.6			0.3	
Approach LOS					C			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.9	65.8		23.3		76.7						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	12.0	35.0		39.5		51.0						
Max Q Clear Time (g_c+I1), s	6.7	2.0		13.4		13.2						
Green Ext Time (p_c), s	0.3	22.7		4.9		24.9						
Intersection Summary												
HCM 2010 Ctrl Delay					13.4							
HCM 2010 LOS					B							

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	143	1226	270	0	0	0	0	1011	188	580	805	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3				0.0	188.1	188.1	188.1	188.1	0.0
Adj Flow Rate, veh/h	152	1304	241				0	1076	179	617	856	0
Adj No. of Lanes	0	4	1				0	4	1	2	2	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	1	1	1	1	0
Cap, veh/h	185	1706	431				0	1809	426	972	2191	0
Arrive On Green	0.28	0.28	0.28				0.00	0.28	0.28	0.56	1.00	0.00
Sat Flow, veh/h	648	5989	1513				0	6735	1523	3476	3668	0
Grp Volume(v), veh/h	430	1026	241				0	1076	179	617	856	0
Grp Sat Flow(s),veh/h/ln	1830	1602	1513				0	1618	1523	1738	1787	0
Q Serve(g_s), s	20.4	18.1	12.6				0.0	13.4	8.9	11.3	0.0	0.0
Cycle Q Clear(g_c), s	20.4	18.1	12.6				0.0	13.4	8.9	11.3	0.0	0.0
Prop In Lane	0.35		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	522	1369	431				0	1809	426	972	2191	0
V/C Ratio(X)	0.82	0.75	0.56				0.00	0.59	0.42	0.63	0.39	0.00
Avail Cap(c_a), veh/h	659	1731	545				0	1809	426	972	2191	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.91	0.91	0.82	0.82	0.00
Uniform Delay (d), s/veh	31.1	30.2	28.3				0.0	28.9	27.3	17.3	0.0	0.0
Incr Delay (d2), s/veh	6.8	1.4	1.1				0.0	1.3	2.8	1.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	8.2	10.7				0.0	6.1	4.1	5.4	0.1	0.0
LnGrp Delay(d),s/veh	37.8	31.6	29.4				0.0	30.3	30.1	18.4	0.4	0.0
LnGrp LOS	D	C	C					C	C	B	A	
Approach Vol, veh/h		1697						1255			1473	
Approach Delay, s/veh		32.9						30.2			7.9	
Approach LOS		C						C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		69.0		31.0	38.0	31.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		57.0		33.5	26.0	* 26						
Max Q Clear Time (g_c+I1), s		2.0		22.4	13.3	15.4						
Green Ext Time (p_c), s		11.5		0.0	6.7	5.8						
Intersection Summary												
HCM 2010 Ctrl Delay			23.8									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 5: Galindo St & Laguna St/Oak St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	34	14	107	40	211	37	966	71	52	923	50
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.95	1.00		0.96
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	184.5	184.5	188.1	188.1	188.1	186.3	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	38	37	-1	116	43	0	40	1050	76	57	1003	53
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	1	1	2	2	2	1	1	1
Cap, veh/h	144	140	247	157	165	140	79	2250	163	98	1641	87
Arrive On Green	0.16	0.16	0.00	0.09	0.09	0.00	0.04	0.47	0.47	0.11	0.95	0.95
Sat Flow, veh/h	912	888	1568	1792	1881	1599	1774	4823	349	1792	3444	182
Grp Volume(v), veh/h	75	0	-1	116	43	0	40	738	388	57	520	536
Grp Sat Flow(s),veh/h/ln	1799	0	1568	1792	1881	1599	1774	1695	1782	1792	1787	1839
Q Serve(g_s), s	2.8	0.0	0.0	4.9	1.6	0.0	1.7	11.4	11.5	2.3	2.5	2.5
Cycle Q Clear(g_c), s	2.8	0.0	0.0	4.9	1.6	0.0	1.7	11.4	11.5	2.3	2.5	2.5
Prop In Lane	0.51		1.00	1.00		1.00	1.00		0.20	1.00		0.10
Lane Grp Cap(c), veh/h	284	0	247	157	165	140	79	1581	831	98	852	876
V/C Ratio(X)	0.26	0.00	0.00	0.74	0.26	0.00	0.50	0.47	0.47	0.58	0.61	0.61
Avail Cap(c_a), veh/h	629	0	549	232	244	207	207	1581	831	209	852	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	28.6	0.0	0.0	34.3	32.9	0.0	36.0	14.0	14.0	33.5	1.0	1.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	6.6	0.8	0.0	4.9	1.0	1.9	4.8	2.9	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	2.7	0.9	0.0	0.9	5.5	6.0	1.3	1.4	1.4
LnGrp Delay(d),s/veh	29.1	0.0	0.0	40.9	33.7	0.0	40.9	15.0	15.9	38.3	4.0	3.9
LnGrp LOS	C			D	C		D	B	B	D	A	A
Approach Vol, veh/h		74			159			1166			1113	
Approach Delay, s/veh		29.5			39.0			16.2			5.7	
Approach LOS		C			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	64.6		16.7	8.2	63.8		11.3				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	9.0	36.0		27.0	9.0	36.0		10.0				
Max Q Clear Time (g_c+1), s	3.7	4.5		4.8	4.3	13.5		6.9				
Green Ext Time (p_c), s	0.0	19.8		0.3	0.0	15.7		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			13.4									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

PM Peak Hour
12/10/2013

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↵	↑↑↑	↑↑↑		↵	↶		
Volume (veh/h)	177	1654	1037	68	138	213		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	188.1	188.1	188.1	190.0	188.1	188.1		
Adj Flow Rate, veh/h	197	1838	1152	63	153	88		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	547	3810	1810	99	215	192		
Arrive On Green	0.31	0.74	0.36	0.36	0.12	0.12		
Sat Flow, veh/h	1792	5305	5147	272	1792	1599		
Grp Volume(v), veh/h	197	1838	792	423	153	88		
Grp Sat Flow(s),veh/h/ln	1792	1712	1712	1826	1792	1599		
Q Serve(g_s), s	5.9	9.9	13.2	13.2	5.6	3.5		
Cycle Q Clear(g_c), s	5.9	9.9	13.2	13.2	5.6	3.5		
Prop In Lane	1.00			0.15	1.00	1.00		
Lane Grp Cap(c), veh/h	547	3810	1245	664	215	192		
V/C Ratio(X)	0.36	0.48	0.64	0.64	0.71	0.46		
Avail Cap(c_a), veh/h	547	3810	1245	664	769	686		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	18.6	3.6	18.1	18.1	29.1	28.2		
Incr Delay (d2), s/veh	0.4	0.4	2.5	4.6	4.3	1.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.0	4.8	6.6	7.4	3.1	1.6		
LnGrp Delay(d),s/veh	19.0	4.0	20.6	22.7	33.4	29.9		
LnGrp LOS	B	A	C	C	C	C		
Approach Vol, veh/h		2035	1215		241			
Approach Delay, s/veh		5.5	21.3		32.1			
Approach LOS		A	C		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	47.3	30.0		12.7		77.3		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	21.0	* 25		29.5		51.0		
Max Q Clear Time (g_c+I1), s	7.9	15.2		7.6		11.9		
Green Ext Time (p_c), s	10.2	5.5		0.7		22.1		
Intersection Summary								
HCM 2010 Ctrl Delay			12.8					
HCM 2010 LOS			B					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

PM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	1455	134	202	740	35	190	49	422	63	42	45
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.95		0.93	0.97		0.95
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	184.5	184.5	190.0	190.0	190.0	190.0	190.0	190.0	190.0
Adj Flow Rate, veh/h	92	1532	65	213	779	34	200	52	265	66	44	31
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	0	0	0
Cap, veh/h	119	2128	90	332	1547	68	429	566	449	378	302	213
Arrive On Green	0.07	0.42	0.42	0.10	0.45	0.45	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1792	5046	214	3408	3417	149	1283	1900	1507	1043	1013	713
Grp Volume(v), veh/h	92	1039	558	213	399	414	200	52	265	66	0	75
Grp Sat Flow(s),veh/h/ln	1792	1712	1836	1704	1752	1813	1283	1900	1507	1043	0	1726
Q Serve(g_s), s	4.1	20.7	20.7	4.9	13.3	13.3	11.1	1.6	12.3	4.0	0.0	2.6
Cycle Q Clear(g_c), s	4.1	20.7	20.7	4.9	13.3	13.3	13.7	1.6	12.3	5.6	0.0	2.6
Prop In Lane	1.00		0.12	1.00		0.08	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	119	1444	774	332	794	821	429	566	449	378	0	514
V/C Ratio(X)	0.77	0.72	0.72	0.64	0.50	0.50	0.47	0.09	0.59	0.17	0.00	0.15
Avail Cap(c_a), veh/h	218	1585	850	332	794	821	500	671	533	436	0	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.7	19.7	19.7	35.7	15.9	15.9	26.2	20.8	24.5	22.8	0.0	21.1
Incr Delay (d2), s/veh	10.2	1.5	2.7	9.2	2.3	2.2	0.8	0.1	1.2	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	10.0	11.0	2.7	6.8	7.0	4.0	0.9	5.3	1.2	0.0	1.3
LnGrp Delay(d),s/veh	47.9	21.2	22.4	44.8	18.2	18.1	27.0	20.9	25.8	23.0	0.0	21.3
LnGrp LOS	D	C	C	D	B	B	C	C	C	C		C
Approach Vol, veh/h		1689			1026			517			141	
Approach Delay, s/veh		23.0			23.7			25.7			22.1	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	50.1		29.5	13.0	47.5		29.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	36.0		29.0	8.0	38.0		29.0				
Max Q Clear Time (g_c+I1), s	6.1	15.3		7.6	6.9	22.7		15.7				
Green Ext Time (p_c), s	0.1	16.1		2.7	0.1	11.9		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				23.6								
HCM 2010 LOS				C								

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	39	1027	18	0	1088
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	42	1116	20	0	1183

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1599	577	0
Stage 1	1126	-	-
Stage 2	473	-	-
Critical Hdwy	5.7	7.1	5.32
Critical Hdwy Stg 1	6.6	-	-
Critical Hdwy Stg 2	6	-	-
Follow-up Hdwy	3.8	3.9	3.11
Pot Cap-1 Maneuver	156	398	339
Stage 1	206	-	-
Stage 2	547	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	155	395	336
Mov Cap-2 Maneuver	155	-	-
Stage 1	206	-	-
Stage 2	543	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	395	336	-
HCM Lane V/C Ratio	-	-	0.107	-	-
HCM Control Delay (s)	-	-	15.2	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↑↑↑		↖↗	↑↑↑	
Volume (veh/h)	14	16	6	0	0	0	0	1347	72	68	736	7
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	184.5	190.0				0.0	184.5	190.0	181.0	181.0	190.0
Adj Flow Rate, veh/h	16	18	1				0	1497	0	76	818	8
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	3	0				0	3	3	5	5	5
Cap, veh/h	48	54	3				0	3601	0	203	4161	41
Arrive On Green	0.06	0.06	0.06				0.00	0.72	0.00	0.06	0.82	0.82
Sat Flow, veh/h	819	922	51				0	5368	0	3343	5044	49
Grp Volume(v), veh/h	35	0	0				0	1497	0	76	534	292
Grp Sat Flow(s),veh/h/ln	1792	0	0				0	1679	0	1672	1647	1800
Q Serve(g_s), s	1.5	0.0	0.0				0.0	9.8	0.0	1.8	2.8	2.8
Cycle Q Clear(g_c), s	1.5	0.0	0.0				0.0	9.8	0.0	1.8	2.8	2.8
Prop In Lane	0.46		0.03				0.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	104	0	0				0	3601	0	203	2717	1485
V/C Ratio(X)	0.34	0.00	0.00				0.00	0.42	0.00	0.38	0.20	0.20
Avail Cap(c_a), veh/h	408	0	0				0	3601	0	782	2717	1485
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.75	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	0.0	0.0				0.0	4.7	0.0	36.7	1.5	1.5
Incr Delay (d2), s/veh	1.9	0.0	0.0				0.0	0.3	0.0	1.1	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0				0.0	4.5	0.0	0.9	1.2	1.4
LnGrp Delay(d),s/veh	38.6	0.0	0.0				0.0	5.0	0.0	37.8	1.6	1.8
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		35						1497			902	
Approach Delay, s/veh		38.6						5.0			4.7	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		85.8		9.2	8.9	76.9						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		67.0		18.5	19.0	44.0						
Max Q Clear Time (g_c+I1), s		4.8		3.5	3.8	11.8						
Green Ext Time (p_c), s		33.1		0.0	0.2	22.3						
Intersection Summary												
HCM 2010 Ctrl Delay			5.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	233	49	162	651	232	95	1101	104	79	596	21
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	188.1	188.1	188.1	184.5	184.5	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	53	253	48	176	708	172	103	1197	113	86	648	23
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	67	529	99	264	1074	469	186	1669	157	115	1570	56
Arrive On Green	0.04	0.18	0.18	0.15	0.30	0.30	0.11	0.36	0.36	0.13	0.63	0.63
Sat Flow, veh/h	1774	2969	554	1792	3574	1562	1757	4673	441	1740	4945	175
Grp Volume(v), veh/h	53	149	152	176	708	172	103	860	450	86	435	236
Grp Sat Flow(s),veh/h/ln	1774	1770	1754	1792	1787	1562	1757	1679	1757	1740	1663	1795
Q Serve(g_s), s	2.2	5.7	5.9	7.0	13.1	4.8	4.2	16.7	16.7	3.6	4.9	4.9
Cycle Q Clear(g_c), s	2.2	5.7	5.9	7.0	13.1	4.8	4.2	16.7	16.7	3.6	4.9	4.9
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.25	1.00		0.10
Lane Grp Cap(c), veh/h	67	315	312	264	1074	469	186	1199	628	115	1055	570
V/C Ratio(X)	0.79	0.47	0.49	0.67	0.66	0.37	0.55	0.72	0.72	0.75	0.41	0.41
Avail Cap(c_a), veh/h	211	655	650	284	1513	661	279	1199	628	207	1055	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77	0.99	0.99	0.99
Uniform Delay (d), s/veh	36.1	27.9	28.0	30.5	23.1	11.2	32.1	21.0	21.0	32.2	10.3	10.3
Incr Delay (d2), s/veh	18.1	1.1	1.2	5.3	0.7	0.5	2.0	2.9	5.4	9.0	1.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.9	3.0	3.9	6.5	2.5	2.1	8.2	9.1	2.0	2.4	2.7
LnGrp Delay(d),s/veh	54.1	29.0	29.1	35.8	23.8	11.7	34.1	23.9	26.4	41.2	11.5	12.5
LnGrp LOS	D	C	C	D	C	B	C	C	C	D	B	B
Approach Vol, veh/h		354			1056			1413			757	
Approach Delay, s/veh		32.8			23.8			25.4			15.2	
Approach LOS		C			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.1	18.5	31.4	29.0	6.9	27.7	28.4	32.0				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	12.0	* 28	12.0	24.0	9.0	32.0	9.0	27.0				
Max Q Clear Time (g_c+1), s	9.0	7.9	6.2	6.9	4.2	15.1	5.6	18.7				
Green Ext Time (p_c), s	1.7	1.7	0.2	4.1	0.0	5.7	0.2	5.2				
Intersection Summary												
HCM 2010 Ctrl Delay			23.5									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

AM Peak Hour
 12/11/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕↕	↗	↘	↕↕			↕↕↕	
Volume (veh/h)	0	0	0	249	1095	450	166	884	0	0	740	76
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	184.5	184.5	182.7	182.7	0.0	0.0	181.0	190.0
Adj Flow Rate, veh/h				259	1141	295	173	921	0	0	771	50
Adj No. of Lanes				0	3	1	1	2	0	0	3	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	4	4	0	0	5	5
Cap, veh/h				283	1341	483	214	1956	0	0	1846	119
Arrive On Green				0.31	0.31	0.31	0.12	0.56	0.00	0.00	0.78	0.78
Sat Flow, veh/h				898	4259	1533	1740	3563	0	0	4904	306
Grp Volume(v), veh/h				519	881	295	173	921	0	0	535	286
Grp Sat Flow(s),veh/h/ln				1800	1679	1533	1740	1736	0	0	1647	1754
Q Serve(g_s), s				21.7	19.0	12.7	7.6	12.3	0.0	0.0	4.2	4.2
Cycle Q Clear(g_c), s				21.7	19.0	12.7	7.6	12.3	0.0	0.0	4.2	4.2
Prop In Lane				0.50		1.00	1.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h				567	1057	483	214	1956	0	0	1282	683
V/C Ratio(X)				0.92	0.83	0.61	0.81	0.47	0.00	0.00	0.42	0.42
Avail Cap(c_a), veh/h				956	1784	815	379	1956	0	0	1282	683
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.85	0.85	0.00	0.00	0.92	0.92
Uniform Delay (d), s/veh				25.8	24.8	22.7	33.4	10.1	0.0	0.0	5.7	5.7
Incr Delay (d2), s/veh				8.1	1.8	1.3	6.1	0.7	0.0	0.0	0.9	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.9	9.1	5.6	4.0	6.1	0.0	0.0	1.9	2.2
LnGrp Delay(d),s/veh				33.8	26.6	23.9	39.5	10.8	0.0	0.0	6.7	7.5
LnGrp LOS				C	C	C	D	B			A	A
Approach Vol, veh/h					1695			1094			821	
Approach Delay, s/veh					28.4			15.4			6.9	
Approach LOS					C			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.6	52.3		29.1		65.9						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	17.0	23.0		41.5		44.0						
Max Q Clear Time (g_c+I1), s	9.6	6.2		23.7		14.3						
Green Ext Time (p_c), s	0.3	10.8		0.0		15.3						
Intersection Summary												
HCM 2010 Ctrl Delay					19.6							
HCM 2010 LOS					B							

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑					↑↑↑	↑	↑↑	↑↑↑	
Volume (veh/h)	134	731	153	0	0	0	0	908	111	254	733	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	182.7	182.7				0.0	182.7	182.7	182.7	182.7	0.0
Adj Flow Rate, veh/h	154	840	113				0	1044	91	292	843	0
Adj No. of Lanes	0	4	1				0	3	1	2	3	0
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	241	1431	380				0	1897	573	621	3122	0
Arrive On Green	0.26	0.26	0.26				0.00	0.38	0.38	0.37	1.00	0.00
Sat Flow, veh/h	937	5556	1475				0	5152	1505	3375	5152	0
Grp Volume(v), veh/h	293	701	113				0	1044	91	292	843	0
Grp Sat Flow(s),veh/h/ln	1780	1571	1475				0	1663	1505	1688	1663	0
Q Serve(g_s), s	11.9	10.6	5.0				0.0	13.4	3.2	5.4	0.0	0.0
Cycle Q Clear(g_c), s	11.9	10.6	5.0				0.0	13.4	3.2	5.4	0.0	0.0
Prop In Lane	0.53		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	458	1214	380				0	1897	573	621	3122	0
V/C Ratio(X)	0.64	0.58	0.30				0.00	0.55	0.16	0.47	0.27	0.00
Avail Cap(c_a), veh/h	754	1996	625				0	1897	573	621	3122	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.93	0.93	0.77	0.77	0.00
Uniform Delay (d), s/veh	26.9	26.4	24.3				0.0	19.8	16.6	22.7	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.4	0.4				0.0	1.1	0.6	0.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	4.6	4.5				0.0	6.3	1.4	2.5	0.0	0.0
LnGrp Delay(d),s/veh	28.4	26.8	24.8				0.0	20.9	17.2	23.1	0.2	0.0
LnGrp LOS	C	C	C					C	B	C	A	
Approach Vol, veh/h		1107						1135			1135	
Approach Delay, s/veh		27.0						20.6			6.1	
Approach LOS		C						C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		69.5		25.5	33.5	36.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		51.0		34.5	15.0	* 31						
Max Q Clear Time (g_c+I1), s		2.0		13.9	7.4	15.4						
Green Ext Time (p_c), s		8.9		0.0	4.0	7.0						
Intersection Summary												
HCM 2010 Ctrl Delay			17.8									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
5: Galindo St & Laguna St/Oak St

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	54	8	59	28	94	26	911	85	104	823	30
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3	181.0	181.0	181.0	182.7	182.7	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	10	59	-1	64	30	0	28	990	91	113	895	32
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	5	5	5	4	4	4	4	4	4
Cap, veh/h	61	359	359	115	121	102	36	1830	168	142	1515	54
Arrive On Green	0.23	0.23	0.00	0.07	0.07	0.00	0.02	0.40	0.40	0.16	0.89	0.89
Sat Flow, veh/h	268	1581	1583	1723	1810	1538	1740	4630	424	1740	3416	122
Grp Volume(v), veh/h	69	0	-1	64	30	0	28	710	371	113	455	472
Grp Sat Flow(s),veh/h/ln	1849	0	1583	1723	1810	1538	1740	1663	1729	1740	1736	1803
Q Serve(g_s), s	2.3	0.0	0.0	2.8	1.2	0.0	1.3	12.9	12.9	4.9	4.9	4.9
Cycle Q Clear(g_c), s	2.3	0.0	0.0	2.8	1.2	0.0	1.3	12.9	12.9	4.9	4.9	4.9
Prop In Lane	0.14		1.00	1.00		1.00	1.00		0.25	1.00		0.07
Lane Grp Cap(c), veh/h	420	0	359	115	121	102	36	1314	683	142	770	800
V/C Ratio(X)	0.16	0.00	0.00	0.56	0.25	0.00	0.79	0.54	0.54	0.80	0.59	0.59
Avail Cap(c_a), veh/h	637	0	545	202	212	180	111	1314	683	266	770	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	24.3	0.0	0.0	35.5	34.7	0.0	38.2	18.2	18.3	32.2	2.7	2.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	4.2	1.1	0.0	30.3	1.6	3.1	9.3	3.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	1.5	0.7	0.0	0.9	6.2	6.8	2.7	2.6	2.7
LnGrp Delay(d),s/veh	24.5	0.0	0.0	39.7	35.8	0.0	68.6	19.8	21.3	41.5	5.9	5.8
LnGrp LOS	C			D	D		E	B	C	D	A	A
Approach Vol, veh/h		68			94			1109			1040	
Approach Delay, s/veh		24.9			38.4			21.6			9.8	
Approach LOS		C			D			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.2	39.8		22.3	10.4	52.6		9.7				
Change Period (Y+Rc), s	5.0	* 5		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	5.84.799999			27.0	12.0	28.8		9.2				
Max Q Clear Time (g_c+I1), s	3.3	6.9		4.3	6.9	14.9		4.8				
Green Ext Time (p_c), s	0.0	6.8		0.3	0.1	6.2		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				17.0								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

AM Peak Hour
12/10/2013

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↘	↑↑↑	↑↑↑		↘	↗		
Volume (veh/h)	97	1068	1287	40	44	114		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	184.5	184.5	186.3	190.0	184.5	184.5		
Adj Flow Rate, veh/h	105	1161	1399	31	48	47		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	295	3925	2735	61	132	118		
Arrive On Green	0.17	0.78	0.53	0.53	0.08	0.08		
Sat Flow, veh/h	1757	5202	5281	113	1757	1568		
Grp Volume(v), veh/h	105	1161	928	502	48	47		
Grp Sat Flow(s),veh/h/ln	1757	1679	1695	1836	1757	1568		
Q Serve(g_s), s	3.5	4.3	11.5	11.5	1.7	1.9		
Cycle Q Clear(g_c), s	3.5	4.3	11.5	11.5	1.7	1.9		
Prop In Lane	1.00			0.06	1.00	1.00		
Lane Grp Cap(c), veh/h	295	3925	1813	982	132	118		
V/C Ratio(X)	0.36	0.30	0.51	0.51	0.36	0.40		
Avail Cap(c_a), veh/h	295	3925	1813	982	792	707		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	24.1	2.1	9.7	9.7	28.8	28.8		
Incr Delay (d2), s/veh	0.7	0.2	1.0	1.9	1.7	2.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.7	2.0	5.5	6.2	0.9	0.9		
LnGrp Delay(d),s/veh	24.8	2.3	10.8	11.6	30.4	31.0		
LnGrp LOS	C	A	B	B	C	C		
Approach Vol, veh/h		1266	1430		95			
Approach Delay, s/veh		4.1	11.1		30.7			
Approach LOS		A	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	40.6	40.0		9.4		80.6		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	11.0	* 35		29.5		51.0		
Max Q Clear Time (g_c+I1), s	5.5	13.5		3.9		6.3		
Green Ext Time (p_c), s	3.6	10.6		0.2		11.7		
Intersection Summary								
HCM 2010 Ctrl Delay			8.6					
HCM 2010 LOS			A					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	568	131	452	1367	9	99	20	143	9	45	12
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.93		0.92	0.93		0.90
Parking Bus, 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
Adj Sat Flow, veh/h/ln	179.2	179.2	190.0	188.1	188.1	190.0	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	20	638	54	508	1536	10	111	22	53	10	51	13
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	1	1	1	2	2	2	2	2	2
Cap, veh/h	45	1600	134	616	1820	12	417	549	428	435	412	105
Arrive On Green	0.03	0.35	0.35	0.18	0.50	0.50	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1707	4580	384	3476	3640	24	1235	1863	1451	1221	1399	357
Grp Volume(v), veh/h	20	453	239	508	754	792	111	22	53	10	0	64
Grp Sat Flow(s),veh/h/ln	1707	1631	1702	1738	1787	1876	1235	1863	1451	1221	0	1756
Q Serve(g_s), s	1.0	8.8	8.9	11.8	30.6	30.7	6.1	0.7	2.2	0.5	0.0	2.2
Cycle Q Clear(g_c), s	1.0	8.8	8.9	11.8	30.6	30.7	8.3	0.7	2.2	1.2	0.0	2.2
Prop In Lane	1.00		0.23	1.00		0.01	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	45	1140	594	616	894	938	417	549	428	435	0	518
V/C Ratio(X)	0.44	0.40	0.40	0.82	0.84	0.84	0.27	0.04	0.12	0.02	0.00	0.12
Avail Cap(c_a), veh/h	122	1140	594	828	894	938	450	599	466	468	0	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.3	20.6	20.7	33.3	18.2	18.2	24.7	21.1	21.7	21.6	0.0	21.7
Incr Delay (d2), s/veh	6.5	0.2	0.4	5.1	9.6	9.2	0.3	0.0	0.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.0	4.3	6.1	17.2	18.0	2.1	0.4	0.9	0.2	0.0	1.1
LnGrp Delay(d),s/veh	46.8	20.9	21.1	38.4	27.7	27.4	25.1	21.2	21.8	21.6	0.0	21.8
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		712			2054			186			74	
Approach Delay, s/veh		21.7			30.2			23.7			21.8	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	47.0		29.8	19.9	34.3		29.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	6.0	42.0		27.0	20.0	28.0		27.0				
Max Q Clear Time (g_c+I1), s	3.0	32.7		4.2	13.8	10.9		10.3				
Green Ext Time (p_c), s	0.0	7.9		1.0	1.1	13.3		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				27.6								
HCM 2010 LOS				C								

Intersection

Int Delay, s/veh	0.2
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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	30	984	30	0	922
Conflicting Peds, #/hr	0	0	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	4	4	4	4
Mvmt Flow	0	33	1070	33	0	1002

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1487	557	0
Stage 1	1086	-	-
Stage 2	401	-	-
Critical Hdwy	5.7	7.1	5.38
Critical Hdwy Stg 1	6.6	-	-
Critical Hdwy Stg 2	6	-	-
Follow-up Hdwy	3.8	3.9	3.14
Pot Cap-1 Maneuver	178	410	344
Stage 1	217	-	-
Stage 2	596	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	177	408	342
Mov Cap-2 Maneuver	177	-	-
Stage 1	217	-	-
Stage 2	593	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6		
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	408	342	-
HCM Lane V/C Ratio	-	-	0.08	-	-
HCM Control Delay (s)	-	-	14.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+						↑↑↑		↑↑	↑↑↑	
Volume (veh/h)	40	40	17	0	0	0	0	1191	72	180	1347	35
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	190.0	190.0				0.0	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	42	42	10				0	1254	0	189	1418	33
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	2	2	1	1	1
Cap, veh/h	76	76	18				0	3413	0	280	4114	96
Arrive On Green	0.09	0.09	0.09				0.00	0.67	0.00	0.08	0.80	0.80
Sat Flow, veh/h	809	809	193				0	5421	0	3476	5160	120
Grp Volume(v), veh/h	94	0	0				0	1254	0	189	941	510
Grp Sat Flow(s),veh/h/ln	1811	0	0				0	1695	0	1738	1712	1857
Q Serve(g_s), s	4.4	0.0	0.0				0.0	9.4	0.0	4.6	6.7	6.7
Cycle Q Clear(g_c), s	4.4	0.0	0.0				0.0	9.4	0.0	4.6	6.7	6.7
Prop In Lane	0.45		0.11				0.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	171	0	0				0	3413	0	280	2730	1480
V/C Ratio(X)	0.55	0.00	0.00				0.00	0.37	0.00	0.68	0.34	0.34
Avail Cap(c_a), veh/h	423	0	0				0	3413	0	831	2730	1480
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.63	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	0.0				0.0	6.3	0.0	39.2	2.5	2.5
Incr Delay (d2), s/veh	2.7	0.0	0.0				0.0	0.2	0.0	2.8	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0				0.0	4.5	0.0	2.3	3.3	3.7
LnGrp Delay(d),s/veh	40.7	0.0	0.0				0.0	6.5	0.0	42.1	2.8	3.1
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		94						1254			1640	
Approach Delay, s/veh		40.7						6.5			7.4	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		87.2		12.8	11.1	76.1						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		70.0		20.5	21.0	45.0						
Max Q Clear Time (g_c+1), s		8.7		6.4	6.6	11.4						
Green Ext Time (p_c), s		40.1		0.0	0.5	26.1						
Intersection Summary												
HCM 2010 Ctrl Delay			8.1									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	91	634	124	103	400	195	144	975	241	225	1018	43
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	188.1	188.1	188.1	188.1	188.1	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	93	647	119	105	408	136	147	995	234	230	1039	33
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	119	846	155	151	1113	486	269	1115	262	269	1379	44
Arrive On Green	0.07	0.28	0.28	0.08	0.31	0.31	0.15	0.27	0.27	0.30	0.54	0.54
Sat Flow, veh/h	1792	2995	550	1792	3574	1562	1792	4133	970	1792	5111	162
Grp Volume(v), veh/h	93	386	380	105	408	136	147	824	405	230	696	376
Grp Sat Flow(s),veh/h/ln	1792	1787	1757	1792	1787	1562	1792	1712	1678	1792	1712	1850
Q Serve(g_s), s	4.5	17.6	17.6	5.1	7.9	3.7	6.8	20.6	20.7	10.8	14.0	14.0
Cycle Q Clear(g_c), s	4.5	17.6	17.6	5.1	7.9	3.7	6.8	20.6	20.7	10.8	14.0	14.0
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.58	1.00		0.09
Lane Grp Cap(c), veh/h	119	505	496	151	1113	486	269	924	453	269	924	499
V/C Ratio(X)	0.78	0.76	0.77	0.70	0.37	0.28	0.55	0.89	0.89	0.86	0.75	0.75
Avail Cap(c_a), veh/h	161	562	553	201	1245	544	383	924	453	383	924	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	0.95	0.95	0.95
Uniform Delay (d), s/veh	40.9	29.2	29.2	39.6	23.8	9.3	35.0	31.2	31.3	30.2	18.2	18.2
Incr Delay (d2), s/veh	15.7	5.6	5.8	6.5	0.2	0.3	1.4	10.6	19.3	11.9	5.4	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	9.5	9.4	2.8	3.9	2.3	3.5	11.1	12.0	6.2	7.2	8.3
LnGrp Delay(d),s/veh	56.6	34.8	35.0	46.1	24.0	9.6	36.4	41.9	50.5	42.2	23.6	27.8
LnGrp LOS	E	C	C	D	C	A	D	D	D	D	C	C
Approach Vol, veh/h		859			649			1376			1302	
Approach Delay, s/veh		37.2			24.6			43.8			28.1	
Approach LOS		D			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	30.1	28.4	29.0	9.9	32.7	28.4	29.0				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	10.0	* 28	19.0	24.0	8.0	31.0	19.0	24.0				
Max Q Clear Time (g_c+I1), s	7.1	19.6	8.8	16.0	6.5	9.9	12.8	22.7				
Green Ext Time (p_c), s	1.0	3.1	0.8	4.2	0.0	3.4	0.6	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			34.6									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

PM Peak Hour
 12/11/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔↔↔	↗	↖	↔↔			↔↔↔	
Volume (veh/h)	0	0	0	196	732	397	198	953	0	0	1176	60
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	188.1	188.1	188.1	188.1	0.0	0.0	188.1	190.0
Adj Flow Rate, veh/h				209	779	245	211	1014	0	0	1251	51
Adj No. of Lanes				0	3	1	1	2	0	0	3	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	1	1	1	1	0	0	1	1
Cap, veh/h				250	1007	371	252	2318	0	0	2329	95
Arrive On Green				0.24	0.24	0.24	0.14	0.65	0.00	0.00	0.92	0.92
Sat Flow, veh/h				1046	4207	1551	1792	3668	0	0	5226	206
Grp Volume(v), veh/h				366	622	245	211	1014	0	0	847	455
Grp Sat Flow(s), veh/h/ln				1829	1712	1551	1792	1787	0	0	1712	1840
Q Serve(g_s), s				16.1	14.3	12.1	9.7	11.8	0.0	0.0	3.3	3.3
Cycle Q Clear(g_c), s				16.1	14.3	12.1	9.7	11.8	0.0	0.0	3.3	3.3
Prop In Lane				0.57		1.00	1.00		0.00	0.00		0.11
Lane Grp Cap(c), veh/h				438	820	371	252	2318	0	0	1577	847
V/C Ratio(X)				0.83	0.76	0.66	0.84	0.44	0.00	0.00	0.54	0.54
Avail Cap(c_a), veh/h				766	1433	649	380	2318	0	0	1577	847
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.63	0.63	0.00	0.00	0.69	0.69
Uniform Delay (d), s/veh				30.7	30.0	29.1	35.5	7.3	0.0	0.0	1.9	1.9
Incr Delay (d2), s/veh				4.2	1.5	2.0	6.4	0.4	0.0	0.0	0.9	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.6	6.9	5.4	5.3	5.9	0.0	0.0	1.5	1.8
LnGrp Delay(d),s/veh				34.9	31.5	31.1	41.9	7.7	0.0	0.0	2.8	3.6
LnGrp LOS				C	C	C	D	A			A	A
Approach Vol, veh/h					1233			1225			1302	
Approach Delay, s/veh					32.4			13.6			3.1	
Approach LOS					C			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	15.9	59.2		24.8		75.2						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	18.0	33.0		35.5		55.0						
Max Q Clear Time (g_c+I1), s	11.7	5.3		18.1		13.8						
Green Ext Time (p_c), s	0.3	19.8		0.1		25.9						
Intersection Summary												
HCM 2010 Ctrl Delay											16.1	
HCM 2010 LOS											B	

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	143	1226	270	0	0	0	0	1011	188	580	805	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3				0.0	188.1	188.1	188.1	188.1	0.0
Adj Flow Rate, veh/h	152	1304	241				0	1076	179	617	856	0
Adj No. of Lanes	0	4	1				0	3	1	2	3	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	1	1	1	1	0
Cap, veh/h	184	1698	429				0	1581	470	885	3162	0
Arrive On Green	0.28	0.28	0.28				0.00	0.31	0.31	0.51	1.00	0.00
Sat Flow, veh/h	648	5989	1513				0	5305	1527	3476	5305	0
Grp Volume(v), veh/h	430	1026	241				0	1076	179	617	856	0
Grp Sat Flow(s),veh/h/ln	1830	1602	1513				0	1712	1527	1738	1712	0
Q Serve(g_s), s	20.7	18.3	12.8				0.0	17.3	8.7	12.7	0.0	0.0
Cycle Q Clear(g_c), s	20.7	18.3	12.8				0.0	17.3	8.7	12.7	0.0	0.0
Prop In Lane	0.35		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	519	1363	429				0	1581	470	885	3162	0
V/C Ratio(X)	0.83	0.75	0.56				0.00	0.68	0.38	0.70	0.27	0.00
Avail Cap(c_a), veh/h	631	1658	522				0	1581	470	885	3162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.91	0.91	0.69	0.69	0.00
Uniform Delay (d), s/veh	31.6	30.7	28.8				0.0	28.6	25.6	20.3	0.0	0.0
Incr Delay (d2), s/veh	7.6	1.6	1.2				0.0	2.2	2.1	1.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	8.3	10.9				0.0	8.5	3.9	6.2	0.0	0.0
LnGrp Delay(d),s/veh	39.2	32.3	29.9				0.0	30.7	27.7	22.0	0.1	0.0
LnGrp LOS	D	C	C					C	C	C	A	
Approach Vol, veh/h		1697						1255			1473	
Approach Delay, s/veh		33.7						30.3			9.3	
Approach LOS		C						C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		68.8		31.2	34.8	34.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		58.0		32.5	24.0	* 29						
Max Q Clear Time (g_c+I1), s		2.0		22.7	14.7	19.3						
Green Ext Time (p_c), s		11.4		0.0	5.4	5.5						
Intersection Summary												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 5: Galindo St & Laguna St/Oak St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	34	14	107	40	211	37	966	71	52	923	50
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.95	1.00		0.96
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	184.5	184.5	188.1	188.1	188.1	186.3	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	38	37	-1	116	43	0	40	1050	76	57	1003	53
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	1	1	2	2	2	1	1	1
Cap, veh/h	146	142	251	160	168	143	44	2184	158	100	1620	86
Arrive On Green	0.16	0.16	0.00	0.09	0.09	0.00	0.03	0.45	0.45	0.11	0.94	0.94
Sat Flow, veh/h	912	888	1568	1792	1881	1599	1774	4823	349	1792	3444	182
Grp Volume(v), veh/h	75	0	-1	116	43	0	40	738	388	57	520	536
Grp Sat Flow(s),veh/h/ln	1799	0	1568	1792	1881	1599	1774	1695	1781	1792	1787	1839
Q Serve(g_s), s	2.7	0.0	0.0	4.7	1.6	0.0	1.7	11.3	11.4	2.2	3.1	3.1
Cycle Q Clear(g_c), s	2.7	0.0	0.0	4.7	1.6	0.0	1.7	11.3	11.4	2.2	3.1	3.1
Prop In Lane	0.51		1.00	1.00		1.00	1.00		0.20	1.00		0.10
Lane Grp Cap(c), veh/h	288	0	251	160	168	143	44	1536	807	100	840	865
V/C Ratio(X)	0.26	0.00	0.00	0.72	0.26	0.00	0.90	0.48	0.48	0.57	0.62	0.62
Avail Cap(c_a), veh/h	665	0	579	301	316	269	143	1536	807	217	840	865
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	27.4	0.0	0.0	33.0	31.6	0.0	36.2	14.2	14.2	32.2	1.3	1.3
Incr Delay (d2), s/veh	0.5	0.0	0.0	6.1	0.8	0.0	41.4	1.1	2.1	4.8	3.2	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	2.6	0.9	0.0	1.3	5.5	6.0	1.2	1.8	1.9
LnGrp Delay(d),s/veh	27.9	0.0	0.0	39.0	32.4	0.0	77.5	15.3	16.3	37.0	4.5	4.4
LnGrp LOS	C			D	C		E	B	B	D	A	A
Approach Vol, veh/h		74			159			1166			1113	
Approach Delay, s/veh		28.3			37.2			17.8			6.1	
Approach LOS		C			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.4	40.0		16.4	8.2	64.3		11.2				
Change Period (Y+Rc), s	5.0	* 5		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	6.0	* 35		27.5	9.0	33.0		12.5				
Max Q Clear Time (g_c+I1), s	3.7	5.1		4.7	4.2	13.4		6.7				
Green Ext Time (p_c), s	0.1	8.2		0.3	0.0	7.9		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				14.2								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 6: Clayton Rd & Fry Way

PM Peak Hour
 12/10/2013

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		  	  			 		
Volume (veh/h)	177	1654	1037	68	138	213		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	188.1	188.1	188.1	190.0	188.1	188.1		
Adj Flow Rate, veh/h	197	1838	1152	63	153	88		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	440	3816	2116	116	214	191		
Arrive On Green	0.25	0.74	0.42	0.42	0.12	0.12		
Sat Flow, veh/h	1792	5305	5148	272	1792	1599		
Grp Volume(v), veh/h	197	1838	792	423	153	88		
Grp Sat Flow(s),veh/h/ln	1792	1712	1712	1827	1792	1599		
Q Serve(g_s), s	6.4	9.9	12.0	12.0	5.7	3.5		
Cycle Q Clear(g_c), s	6.4	9.9	12.0	12.0	5.7	3.5		
Prop In Lane	1.00			0.15	1.00	1.00		
Lane Grp Cap(c), veh/h	440	3816	1455	776	214	191		
V/C Ratio(X)	0.45	0.48	0.54	0.54	0.71	0.46		
Avail Cap(c_a), veh/h	440	3816	1455	776	754	673		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	22.1	3.6	14.9	14.9	29.3	28.4		
Incr Delay (d2), s/veh	0.7	0.4	1.5	2.7	4.4	1.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.3	4.7	5.9	6.6	3.1	1.7		
LnGrp Delay(d),s/veh	22.8	4.0	16.3	17.6	33.7	30.1		
LnGrp LOS	C	A	B	B	C	C		
Approach Vol, veh/h		2035	1215		241			
Approach Delay, s/veh		5.8	16.8		32.4			
Approach LOS		A	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	42.8	34.4		12.8		77.2		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	17.0	* 29.4		29.1		51.4		
Max Q Clear Time (g_c+I1), s	8.4	14.0		7.7		11.9		
Green Ext Time (p_c), s	7.1	7.4		0.7		22.2		
Intersection Summary								
HCM 2010 Ctrl Delay			11.5					
HCM 2010 LOS			B					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
 7: Oakland Ave/Driveway & Clayton Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	1455	134	202	740	35	190	49	422	63	42	45
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pBT)	1.00		0.97	1.00		0.97	0.95		0.93	0.97		0.95
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	184.5	184.5	190.0	190.0	190.0	190.0	190.0	190.0	190.0
Adj Flow Rate, veh/h	92	1532	65	213	779	34	200	52	265	66	44	31
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	0	0	0
Cap, veh/h	119	2128	90	332	1547	68	429	566	449	378	302	213
Arrive On Green	0.07	0.42	0.42	0.10	0.45	0.45	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1792	5046	214	3408	3417	149	1283	1900	1507	1043	1013	713
Grp Volume(v), veh/h	92	1039	558	213	399	414	200	52	265	66	0	75
Grp Sat Flow(s),veh/h/ln	1792	1712	1836	1704	1752	1813	1283	1900	1507	1043	0	1726
Q Serve(g_s), s	4.1	20.7	20.7	4.9	13.3	13.3	11.1	1.6	12.3	4.0	0.0	2.6
Cycle Q Clear(g_c), s	4.1	20.7	20.7	4.9	13.3	13.3	13.7	1.6	12.3	5.6	0.0	2.6
Prop In Lane	1.00		0.12	1.00		0.08	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	119	1444	774	332	794	821	429	566	449	378	0	514
V/C Ratio(X)	0.77	0.72	0.72	0.64	0.50	0.50	0.47	0.09	0.59	0.17	0.00	0.15
Avail Cap(c_a), veh/h	218	1585	850	332	794	821	500	671	533	436	0	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.7	19.7	19.7	35.7	15.9	15.9	26.2	20.8	24.5	22.8	0.0	21.1
Incr Delay (d2), s/veh	10.2	1.5	2.7	9.2	2.3	2.2	0.8	0.1	1.2	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	10.0	11.0	2.7	6.8	7.0	4.0	0.9	5.3	1.2	0.0	1.3
LnGrp Delay(d),s/veh	47.9	21.2	22.4	44.8	18.2	18.1	27.0	20.9	25.8	23.0	0.0	21.3
LnGrp LOS	D	C	C	D	B	B	C	C	C	C		C
Approach Vol, veh/h		1689			1026			517			141	
Approach Delay, s/veh		23.0			23.7			25.7			22.1	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	50.1		29.5	13.0	47.5		29.5				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	36.0		29.0	8.0	38.0		29.0				
Max Q Clear Time (g_c+I1), s	6.1	15.3		7.6	6.9	22.7		15.7				
Green Ext Time (p_c), s	0.1	16.1		2.7	0.1	11.9		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				23.6								
HCM 2010 LOS				C								

Intersection

Int Delay, s/veh	0.3
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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	39	1027	18	0	1088
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	42	1116	20	0	1183

Major/Minor	Minor1	Minor2	Major1	Major2
Conflicting Flow All	1599	577	0	0
Stage 1	1126	-	-	-
Stage 2	473	-	-	-
Critical Hdwy	5.7	7.1	-	5.32
Critical Hdwy Stg 1	6.6	-	-	-
Critical Hdwy Stg 2	6	-	-	-
Follow-up Hdwy	3.8	3.9	-	3.11
Pot Cap-1 Maneuver	156	398	-	339
Stage 1	206	-	-	-
Stage 2	547	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	155	395	-	336
Mov Cap-2 Maneuver	155	-	-	-
Stage 1	206	-	-	-
Stage 2	543	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	395	336	-
HCM Lane V/C Ratio	-	-	0.107	-	-
HCM Control Delay (s)	-	-	15.2	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

AM Peak Hour
 12/11/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	30	10	0	0	0	0	1760	100	90	960	10
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	184.5	190.0				0.0	184.5	190.0	181.0	181.0	190.0
Adj Flow Rate, veh/h	22	33	6				0	1913	0	98	1043	11
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	0				0	3	3	5	5	5
Cap, veh/h	42	63	12				0	3702	0	194	4207	44
Arrive On Green	0.07	0.07	0.07				0.00	0.74	0.00	0.06	0.83	0.83
Sat Flow, veh/h	640	959	174				0	5368	0	3343	5039	53
Grp Volume(v), veh/h	61	0	0				0	1913	0	98	682	372
Grp Sat Flow(s),veh/h/ln	1773	0	0				0	1679	0	1672	1647	1799
Q Serve(g_s), s	3.2	0.0	0.0				0.0	15.6	0.0	2.7	4.1	4.1
Cycle Q Clear(g_c), s	3.2	0.0	0.0				0.0	15.6	0.0	2.7	4.1	4.1
Prop In Lane	0.36		0.10				0.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	117	0	0				0	3702	0	194	2749	1502
V/C Ratio(X)	0.52	0.00	0.00				0.00	0.52	0.00	0.51	0.25	0.25
Avail Cap(c_a), veh/h	379	0	0				0	3702	0	733	2749	1502
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.44	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	0.0	0.0				0.0	5.4	0.0	43.8	1.6	1.6
Incr Delay (d2), s/veh	3.5	0.0	0.0				0.0	0.2	0.0	2.0	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0				0.0	7.2	0.0	1.3	1.9	2.1
LnGrp Delay(d),s/veh	46.8	0.0	0.0				0.0	5.7	0.0	45.8	1.9	2.0
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		61						1913			1152	
Approach Delay, s/veh		46.8						5.7			5.7	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		99.2		10.8	9.6	89.6						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		80.0		20.5	21.0	55.0						
Max Q Clear Time (g_c+I1), s		6.1		5.2	4.7	17.6						
Green Ext Time (p_c), s		52.6		0.0	0.2	31.1						
Intersection Summary												
HCM 2010 Ctrl Delay			6.5									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

AM Peak Hour
 12/11/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	310	70	220	850	310	130	1440	140	110	780	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	188.1	188.1	188.1	184.5	184.5	190.0	182.7	182.7	182.7
Adj Flow Rate, veh/h	76	337	71	239	924	257	141	1565	152	120	848	33
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	186	803	167	394	1115	487	174	1745	169	151	1257	560
Arrive On Green	0.04	0.28	0.28	0.08	0.31	0.31	0.10	0.37	0.37	0.03	0.12	0.12
Sat Flow, veh/h	1774	2912	606	1792	3574	1563	1757	4660	452	1740	3471	1545
Grp Volume(v), veh/h	76	203	205	239	924	257	141	1127	590	120	848	33
Grp Sat Flow(s),veh/h/ln	1774	1770	1748	1792	1787	1563	1757	1679	1755	1740	1736	1545
Q Serve(g_s), s	3.0	9.3	9.5	8.0	23.7	13.4	7.8	31.2	31.3	6.8	23.1	1.9
Cycle Q Clear(g_c), s	3.0	9.3	9.5	8.0	23.7	13.4	7.8	31.2	31.3	6.8	23.1	1.9
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	186	488	482	394	1115	487	174	1257	657	151	1257	560
V/C Ratio(X)	0.41	0.42	0.43	0.61	0.83	0.53	0.81	0.90	0.90	0.80	0.67	0.06
Avail Cap(c_a), veh/h	251	591	584	394	1194	522	338	1257	657	247	1257	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.55	0.55	0.55	0.98	0.98	0.98
Uniform Delay (d), s/veh	26.3	29.3	29.4	24.8	31.5	28.0	43.6	29.1	29.1	47.1	37.9	28.6
Incr Delay (d2), s/veh	1.4	0.6	0.6	2.7	4.8	0.9	5.0	6.0	10.7	9.0	2.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.6	4.6	2.1	12.4	5.9	4.0	15.5	17.0	3.7	11.6	0.8
LnGrp Delay(d),s/veh	27.7	29.8	30.0	27.5	36.3	28.9	48.6	35.1	39.8	56.1	40.8	28.8
LnGrp LOS	C	C	C	C	D	C	D	D	D	E	D	C
Approach Vol, veh/h		484			1420			1858			1001	
Approach Delay, s/veh		29.6			33.5			37.6			42.2	
Approach LOS		C			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	32.2	13.8	52.0	8.4	35.8	12.6	53.2				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	8.0	33.0	19.0	32.0	8.0	33.0	14.0	37.0				
Max Q Clear Time (g_c+I1), s	10.0	11.5	9.8	25.1	5.0	25.7	8.8	33.3				
Green Ext Time (p_c), s	0.0	10.7	0.2	6.3	0.0	5.1	0.1	3.5				
Intersection Summary												
HCM 2010 Ctrl Delay			36.5									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

AM Peak Hour
 12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					  		 	 			  	
Volume (veh/h)	0	0	0	330	1430	590	220	1150	0	0	970	100
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				184.5	184.5	184.5	182.7	182.7	0.0	190.0	181.0	181.0
Adj Flow Rate, veh/h				344	1490	441	229	1198	0	0	1010	75
Adj No. of Lanes				1	3	1	2	2	0	0	3	1
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	4	4	0	5	5	5
Cap, veh/h				595	1706	520	303	1990	0	0	2206	683
Arrive On Green				0.34	0.34	0.34	0.09	0.57	0.00	0.00	0.89	0.89
Sat Flow, veh/h				1757	5036	1535	3375	3563	0	0	5103	1529
Grp Volume(v), veh/h				344	1490	441	229	1198	0	0	1010	75
Grp Sat Flow(s),veh/h/ln				1757	1679	1535	1688	1736	0	0	1647	1529
Q Serve(g_s), s				17.4	30.0	28.8	7.2	24.3	0.0	0.0	4.0	0.6
Cycle Q Clear(g_c), s				17.4	30.0	28.8	7.2	24.3	0.0	0.0	4.0	0.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				595	1706	520	303	1990	0	0	2206	683
V/C Ratio(X)				0.58	0.87	0.85	0.76	0.60	0.00	0.00	0.46	0.11
Avail Cap(c_a), veh/h				625	1793	546	624	1990	0	0	2206	683
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.86	0.86	0.00	0.00	0.83	0.83
Uniform Delay (d), s/veh				29.4	33.6	33.2	48.1	15.0	0.0	0.0	3.4	3.2
Incr Delay (d2), s/veh				1.2	4.9	11.6	3.3	1.2	0.0	0.0	0.6	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.6	14.7	13.8	3.5	12.0	0.0	0.0	1.8	0.3
LnGrp Delay(d),s/veh				30.6	38.5	44.7	51.4	16.2	0.0	0.0	4.0	3.5
LnGrp LOS				C	D	D	D	B			A	A
Approach Vol, veh/h					2275			1427			1085	
Approach Delay, s/veh					38.5			21.8			3.9	
Approach LOS					D			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.7	55.2		41.1		68.9						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	20.0	38.0		38.5		62.0						
Max Q Clear Time (g_c+l1), s	9.2	6.0		32.0		26.3						
Green Ext Time (p_c), s	0.6	22.0		4.6		23.7						
Intersection Summary												
HCM 2010 Ctrl Delay											25.7	
HCM 2010 LOS											C	

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑					↑↑↑	↑	↑↑	↑↑	
Volume (veh/h)	180	960	200	0	0	0	0	1190	150	340	960	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	182.7	182.7				0.0	182.7	182.7	182.7	182.7	0.0
Adj Flow Rate, veh/h	196	1043	157				0	1293	128	370	1043	0
Adj No. of Lanes	0	4	1				0	4	1	2	2	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	249	1437	383				0	2686	644	570	2242	0
Arrive On Green	0.26	0.26	0.26				0.00	0.43	0.43	0.34	1.00	0.00
Sat Flow, veh/h	959	5534	1476				0	6540	1507	3375	3563	0
Grp Volume(v), veh/h	364	875	157				0	1293	128	370	1043	0
Grp Sat Flow(s),veh/h/ln	1779	1571	1476				0	1571	1507	1688	1736	0
Q Serve(g_s), s	19.1	17.0	8.9				0.0	14.9	5.4	9.4	0.0	0.0
Cycle Q Clear(g_c), s	19.1	17.0	8.9				0.0	14.9	5.4	9.4	0.0	0.0
Prop In Lane	0.54		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	462	1224	383				0	2686	644	570	2242	0
V/C Ratio(X)	0.79	0.72	0.41				0.00	0.48	0.20	0.65	0.47	0.00
Avail Cap(c_a), veh/h	628	1663	521				0	2686	644	570	2242	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.80	0.80	0.85	0.85	0.00
Uniform Delay (d), s/veh	34.7	33.9	30.9				0.0	20.8	18.0	30.8	0.0	0.0
Incr Delay (d2), s/veh	4.7	0.9	0.7				0.0	0.5	0.6	2.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	7.5	7.7				0.0	6.6	2.3	4.5	0.2	0.0
LnGrp Delay(d),s/veh	39.4	34.8	31.6				0.0	21.3	18.6	33.0	0.6	0.0
LnGrp LOS	D	C	C					C	B	C	A	
Approach Vol, veh/h		1396						1421			1413	
Approach Delay, s/veh		35.6						21.0			9.1	
Approach LOS		D						C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		79.4		30.6	31.4	48.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		65.0		35.5	17.0	* 43						
Max Q Clear Time (g_c+l1), s		2.0		21.1	11.4	16.9						
Green Ext Time (p_c), s		12.8		0.0	3.8	11.5						
Intersection Summary												
HCM 2010 Ctrl Delay			21.9									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
5: Galindo St & Laguna St/Oak St

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	80	20	80	40	130	40	1190	120	140	1070	40
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3	181.0	181.0	181.0	182.7	182.7	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	22	87	12	87	43	0	43	1293	129	152	1163	42
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	5	5	5	4	4	4	4	4	4
Cap, veh/h	84	331	314	123	129	110	78	1765	176	187	1527	55
Arrive On Green	0.22	0.22	0.22	0.07	0.07	0.00	0.05	0.38	0.38	0.21	0.89	0.89
Sat Flow, veh/h	372	1472	1396	1723	1810	1538	1740	4588	458	1740	3415	123
Grp Volume(v), veh/h	109	0	12	87	43	0	43	937	485	152	591	614
Grp Sat Flow(s),veh/h/ln	1844	0	1396	1723	1810	1538	1740	1663	1721	1740	1736	1802
Q Serve(g_s), s	4.1	0.0	0.6	4.2	1.9	0.0	2.1	20.5	20.5	7.1	9.6	9.6
Cycle Q Clear(g_c), s	4.1	0.0	0.6	4.2	1.9	0.0	2.1	20.5	20.5	7.1	9.6	9.6
Prop In Lane	0.20		1.00	1.00		1.00	1.00		0.27	1.00		0.07
Lane Grp Cap(c), veh/h	415	0	314	123	129	110	78	1279	662	187	776	806
V/C Ratio(X)	0.26	0.00	0.04	0.71	0.33	0.00	0.55	0.73	0.73	0.81	0.76	0.76
Avail Cap(c_a), veh/h	640	0	485	233	245	208	266	1279	662	491	776	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	27.1	0.0	25.8	38.6	37.5	0.0	39.7	22.4	22.4	32.6	3.0	3.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	7.2	1.5	0.0	5.9	3.7	7.0	7.3	6.1	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.2	2.3	1.0	0.0	1.1	10.0	11.0	3.7	5.1	5.2
LnGrp Delay(d),s/veh	27.5	0.0	25.8	45.8	39.0	0.0	45.6	26.2	29.5	39.8	9.1	8.9
LnGrp LOS	C		C	D	D		D	C	C	D	A	A
Approach Vol, veh/h		121			130			1465			1357	
Approach Delay, s/veh		27.3			43.6			27.8			12.5	
Approach LOS		C			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	68.0		23.6	13.1	62.7		10.6				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	13.0	38.0		29.5	24.0	27.0		11.5				
Max Q Clear Time (g_c+I1), s	4.1	11.6		6.1	9.1	22.5		6.2				
Green Ext Time (p_c), s	0.0	20.9		0.6	0.3	4.2		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			21.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

AM Peak Hour
12/10/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Volume (veh/h)	130	1390	1680	60	60	150		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	184.5	184.5	186.3	190.0	184.5	184.5		
Adj Flow Rate, veh/h	141	1511	1826	53	65	86		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	282	4039	2942	85	142	126		
Arrive On Green	0.16	0.80	0.58	0.58	0.08	0.08		
Sat Flow, veh/h	1757	5202	5240	147	1757	1568		
Grp Volume(v), veh/h	141	1511	1220	659	65	86		
Grp Sat Flow(s),veh/h/ln	1757	1679	1695	1829	1757	1568		
Q Serve(g_s), s	5.9	6.9	19.1	19.2	2.9	4.3		
Cycle Q Clear(g_c), s	5.9	6.9	19.1	19.2	2.9	4.3		
Prop In Lane	1.00			0.08	1.00	1.00		
Lane Grp Cap(c), veh/h	282	4039	1966	1061	142	126		
V/C Ratio(X)	0.50	0.37	0.62	0.62	0.46	0.68		
Avail Cap(c_a), veh/h	282	4039	1966	1061	770	687		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	31.1	2.3	11.2	11.2	35.6	36.2		
Incr Delay (d2), s/veh	1.4	0.3	1.5	2.7	2.3	6.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.0	3.2	9.2	10.3	1.5	2.1		
LnGrp Delay(d),s/veh	32.4	2.5	12.6	13.9	37.9	42.5		
LnGrp LOS	C	A	B	B	D	D		
Approach Vol, veh/h		1652	1879		151			
Approach Delay, s/veh		5.1	13.1		40.5			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	47.0	52.0		11.0		99.0		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	13.0	* 47		35.5		65.0		
Max Q Clear Time (g_c+I1), s	7.9	21.2		6.3		8.9		
Green Ext Time (p_c), s	4.0	16.1		0.4		18.6		
Intersection Summary								
HCM 2010 Ctrl Delay			10.6					
HCM 2010 LOS			B					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	740	180	590	1780	20	130	30	190	20	60	20
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pBT)	1.00		0.94	1.00		0.98	0.93		0.92	0.93		0.91
Parking Bus, 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
Adj Sat Flow, veh/h/ln	179.2	179.2	190.0	188.1	188.1	190.0	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	33	804	106	641	1935	22	141	33	103	22	65	22
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	1	1	1	2	2	2	2	2	2
Cap, veh/h	66	1299	170	747	1720	20	413	567	443	428	394	133
Arrive On Green	0.04	0.30	0.30	0.22	0.48	0.48	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1707	4346	568	3476	3619	41	1217	1863	1455	1166	1295	438
Grp Volume(v), veh/h	33	602	308	641	953	1004	141	33	103	22	0	87
Grp Sat Flow(s),veh/h/ln	1707	1631	1652	1738	1787	1873	1217	1863	1455	1166	0	1733
Q Serve(g_s), s	1.6	13.1	13.3	14.7	39.2	39.2	7.9	1.0	4.4	1.1	0.0	3.0
Cycle Q Clear(g_c), s	1.6	13.1	13.3	14.7	39.2	39.2	11.0	1.0	4.4	2.2	0.0	3.0
Prop In Lane	1.00		0.34	1.00		0.02	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	66	975	494	747	849	890	413	567	443	428	0	528
V/C Ratio(X)	0.50	0.62	0.62	0.86	1.12	1.13	0.34	0.06	0.23	0.05	0.00	0.16
Avail Cap(c_a), veh/h	165	1027	520	884	849	890	455	632	494	468	0	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.9	24.9	25.0	31.2	21.7	21.7	25.0	20.3	21.5	21.1	0.0	21.0
Incr Delay (d2), s/veh	5.8	1.0	2.2	7.4	70.4	71.7	0.5	0.0	0.3	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.0	6.4	7.8	35.7	37.8	2.7	0.5	1.8	0.4	0.0	1.5
LnGrp Delay(d),s/veh	44.7	25.9	27.1	38.6	92.1	93.4	25.5	20.4	21.8	21.1	0.0	21.2
LnGrp LOS	D	C	C	D	F	F	C	C	C	C	C	C
Approach Vol, veh/h		943			2598			277			109	
Approach Delay, s/veh		27.0			79.4			23.5			21.2	
Approach LOS		C			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	44.2		30.1	22.8	29.7		30.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	39.0		28.0	21.0	26.0		28.0				
Max Q Clear Time (g_c+I1), s	3.6	41.2		5.0	16.7	15.3		13.0				
Green Ext Time (p_c), s	0.0	0.0		1.6	1.1	9.4		1.4				
Intersection Summary												
HCM 2010 Ctrl Delay			61.2									
HCM 2010 LOS			E									

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	40	1280	40	0	1200
Conflicting Peds, #/hr	0	0	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	4	4	4	4
Mvmt Flow	0	43	1391	43	0	1304

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	1935	723	0	0	1435	0
Stage 1	1413	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	5.7	7.1	-	-	5.38	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	-	-	3.14	-
Pot Cap-1 Maneuver	104	320	-	-	235	-
Stage 1	137	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	103	318	-	-	234	-
Mov Cap-2 Maneuver	103	-	-	-	-	-
Stage 1	137	-	-	-	-	-
Stage 2	513	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	318	234	-
HCM Lane V/C Ratio	-	-	0.137	-	-
HCM Control Delay (s)	-	-	18.1	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↑↑↑		↖↗	↑↑↑	
Volume (veh/h)	50	50	30	0	0	0	0	1430	90	220	1620	50
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	190.0	190.0				0.0	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	53	53	24				0	1505	0	232	1705	49
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	2	2	1	1	1
Cap, veh/h	78	78	35				0	3449	0	313	4128	119
Arrive On Green	0.11	0.11	0.11				0.00	0.68	0.00	0.09	0.81	0.81
Sat Flow, veh/h	727	727	329				0	5421	0	3476	5128	147
Grp Volume(v), veh/h	130	0	0				0	1505	0	232	1138	616
Grp Sat Flow(s),veh/h/ln	1784	0	0				0	1695	0	1738	1712	1851
Q Serve(g_s), s	7.6	0.0	0.0				0.0	14.6	0.0	7.0	10.5	10.5
Cycle Q Clear(g_c), s	7.6	0.0	0.0				0.0	14.6	0.0	7.0	10.5	10.5
Prop In Lane	0.41		0.18				0.00		0.00	1.00		0.08
Lane Grp Cap(c), veh/h	191	0	0				0	3449	0	313	2756	1490
V/C Ratio(X)	0.68	0.00	0.00				0.00	0.44	0.00	0.74	0.41	0.41
Avail Cap(c_a), veh/h	388	0	0				0	3449	0	836	2756	1490
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.51	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	0.0	0.0				0.0	8.0	0.0	48.0	3.1	3.1
Incr Delay (d2), s/veh	4.2	0.0	0.0				0.0	0.2	0.0	3.5	0.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0				0.0	6.9	0.0	3.5	5.1	5.7
LnGrp Delay(d),s/veh	50.7	0.0	0.0				0.0	8.2	0.0	51.4	3.5	3.9
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		130						1505			1986	
Approach Delay, s/veh		50.7						8.2			9.3	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		103.9		16.1	13.7	90.2						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		87.0		23.5	26.0	57.0						
Max Q Clear Time (g_c+I1), s		12.5		9.6	9.0	16.6						
Green Ext Time (p_c), s		58.0		0.0	0.7	35.0						
Intersection Summary												
HCM 2010 Ctrl Delay			10.3									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	770	150	130	480	240	180	1170	290	270	1230	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	188.1	188.1	188.1	188.1	188.1	190.0	188.1	188.1	188.1
Adj Flow Rate, veh/h	112	786	145	133	490	182	184	1194	284	276	1255	50
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	278	835	154	166	997	435	212	1437	342	303	1426	632
Arrive On Green	0.05	0.28	0.28	0.05	0.28	0.28	0.12	0.35	0.35	0.34	0.80	0.80
Sat Flow, veh/h	1792	2992	552	1792	3574	1558	1792	4123	981	1792	3574	1583
Grp Volume(v), veh/h	112	469	462	133	490	182	184	991	487	276	1255	50
Grp Sat Flow(s),veh/h/ln	1792	1787	1757	1792	1787	1558	1792	1712	1680	1792	1787	1583
Q Serve(g_s), s	5.3	30.3	30.3	6.0	13.5	11.2	11.9	31.3	31.3	17.4	28.1	0.8
Cycle Q Clear(g_c), s	5.3	30.3	30.3	6.0	13.5	11.2	11.9	31.3	31.3	17.4	28.1	0.8
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	278	499	490	166	997	435	212	1193	585	303	1426	632
V/C Ratio(X)	0.40	0.94	0.94	0.80	0.49	0.42	0.87	0.83	0.83	0.91	0.88	0.08
Avail Cap(c_a), veh/h	278	501	492	166	1001	436	243	1193	585	426	1426	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68	0.91	0.91	0.91
Uniform Delay (d), s/veh	29.1	41.5	41.5	34.2	35.5	34.7	51.0	35.2	35.2	38.2	10.0	7.2
Incr Delay (d2), s/veh	0.9	26.3	26.6	24.1	0.4	0.6	17.8	4.7	9.1	17.4	7.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	18.5	18.2	2.4	6.7	4.9	6.9	15.5	15.9	9.9	14.4	0.4
LnGrp Delay(d),s/veh	30.1	67.8	68.2	58.2	35.9	35.3	68.8	39.9	44.3	55.6	17.4	7.5
LnGrp LOS	C	E	E	E	D	D	E	D	D	E	B	A
Approach Vol, veh/h		1043			805			1662			1581	
Approach Delay, s/veh		63.9			39.4			44.4			23.7	
Approach LOS		E			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	37.9	18.0	54.2	10.0	37.9	23.9	48.2				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	6.0	33.0	16.0	47.0	6.0	33.0	28.0	35.0				
Max Q Clear Time (g_c+l1), s	8.0	32.3	13.9	30.1	7.3	15.5	19.4	33.3				
Green Ext Time (p_c), s	0.0	0.6	0.1	14.9	0.0	9.6	0.5	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			41.2									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

PM Peak Hour
 12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	240	880	480	240	1150	0	0	1420	80
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				188.1	188.1	188.1	188.1	188.1	0.0	190.0	188.1	188.1
Adj Flow Rate, veh/h				255	936	334	255	1223	0	0	1511	72
Adj No. of Lanes				1	3	1	2	2	0	0	3	1
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	1	1	1	1	0	1	1	1
Cap, veh/h				473	1356	410	333	2328	0	0	2669	814
Arrive On Green				0.26	0.26	0.26	0.10	0.65	0.00	0.00	1.00	1.00
Sat Flow, veh/h				1792	5136	1554	3476	3668	0	0	5305	1566
Grp Volume(v), veh/h				255	936	334	255	1223	0	0	1511	72
Grp Sat Flow(s),veh/h/ln				1792	1712	1554	1738	1787	0	0	1712	1566
Q Serve(g_s), s				13.7	18.4	22.6	8.0	20.3	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				13.7	18.4	22.6	8.0	20.3	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				473	1356	410	333	2328	0	0	2669	814
V/C Ratio(X)				0.54	0.69	0.81	0.77	0.53	0.00	0.00	0.57	0.09
Avail Cap(c_a), veh/h				599	1718	520	744	2328	0	0	2669	814
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.80	0.80	0.00	0.00	0.35	0.35
Uniform Delay (d), s/veh				35.4	37.1	38.7	49.5	10.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				1.0	0.8	7.7	3.0	0.7	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.9	8.8	10.5	4.0	10.2	0.0	0.0	0.1	0.0
LnGrp Delay(d),s/veh				36.4	38.0	46.4	52.4	11.0	0.0	0.0	0.3	0.1
LnGrp LOS				D	D	D	D	B			A	A
Approach Vol, veh/h					1525			1478			1583	
Approach Delay, s/veh					39.5			18.2			0.3	
Approach LOS					D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	14.7	71.2		34.1		85.9						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	24.0	45.0		37.5		73.0						
Max Q Clear Time (g_c+I1), s	10.0	2.0		24.6		22.3						
Green Ext Time (p_c), s	0.7	33.2		5.0		37.6						
Intersection Summary												
HCM 2010 Ctrl Delay					19.1							
HCM 2010 LOS					B							

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	1480	330	0	0	0	0	1220	230	700	970	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3				0.0	188.1	188.1	188.1	188.1	0.0
Adj Flow Rate, veh/h	191	1574	305				0	1298	224	745	1032	0
Adj No. of Lanes	0	4	1				0	4	1	2	2	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	1	1	1	1	0
Cap, veh/h	199	1770	450				0	2289	542	790	2227	0
Arrive On Green	0.30	0.30	0.30				0.00	0.35	0.35	0.45	1.00	0.00
Sat Flow, veh/h	671	5964	1516				0	6735	1532	3476	3668	0
Grp Volume(v), veh/h	521	1244	305				0	1298	224	745	1032	0
Grp Sat Flow(s), veh/h/ln	1829	1602	1516				0	1618	1532	1738	1787	0
Q Serve(g_s), s	33.2	29.2	21.0				0.0	19.3	13.1	24.3	0.0	0.0
Cycle Q Clear(g_c), s	33.2	29.2	21.0				0.0	19.3	13.1	24.3	0.0	0.0
Prop In Lane	0.37		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	543	1427	450				0	2289	542	790	2227	0
V/C Ratio(X)	0.96	0.87	0.68				0.00	0.57	0.41	0.94	0.46	0.00
Avail Cap(c_a), veh/h	562	1477	466				0	2289	542	790	2227	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.86	0.86	0.75	0.75	0.00
Uniform Delay (d), s/veh	41.0	39.6	36.8				0.0	31.0	29.0	31.6	0.0	0.0
Incr Delay (d2), s/veh	27.5	5.9	3.8				0.0	0.9	2.0	15.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.9	13.7	17.5				0.0	8.7	5.8	13.2	0.2	0.0
LnGrp Delay(d),s/veh	68.5	45.5	40.5				0.0	31.9	31.0	47.5	0.5	0.0
LnGrp LOS	E	D	D					C	C	D	A	
Approach Vol, veh/h		2070						1522			1777	
Approach Delay, s/veh		50.5						31.8			20.2	
Approach LOS		D						C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		80.3		39.7	33.3	47.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		74.0		36.5	27.0	* 42						
Max Q Clear Time (g_c+I1), s		2.0		35.2	26.3	21.3						
Green Ext Time (p_c), s		16.4		0.0	0.6	10.7						
Intersection Summary												
HCM 2010 Ctrl Delay			35.2									
HCM 2010 LOS			D									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 5: Galindo St & Laguna St/Oak St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	50	20	130	50	260	50	1160	90	70	1110	60
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pBT)	1.00		0.92	1.00		1.00	1.00		0.96	1.00		0.96
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	184.5	184.5	188.1	188.1	188.1	186.3	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	54	54	6	141	54	0	54	1261	97	76	1207	64
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	1	1	2	2	2	1	1	1
Cap, veh/h	140	140	224	176	185	157	83	2440	188	98	1777	94
Arrive On Green	0.16	0.16	0.16	0.10	0.10	0.00	0.05	0.51	0.51	0.11	1.00	1.00
Sat Flow, veh/h	900	900	1438	1792	1881	1599	1774	4799	369	1792	3444	182
Grp Volume(v), veh/h	108	0	6	141	54	0	54	891	467	76	626	645
Grp Sat Flow(s),veh/h/ln	1800	0	1438	1792	1881	1599	1774	1695	1778	1792	1787	1840
Q Serve(g_s), s	5.3	0.0	0.3	7.6	2.6	0.0	2.9	17.2	17.2	4.1	0.0	0.0
Cycle Q Clear(g_c), s	5.3	0.0	0.3	7.6	2.6	0.0	2.9	17.2	17.2	4.1	0.0	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		0.21	1.00		0.10
Lane Grp Cap(c), veh/h	281	0	224	176	185	157	83	1724	904	98	922	949
V/C Ratio(X)	0.38	0.00	0.03	0.80	0.29	0.00	0.65	0.52	0.52	0.78	0.68	0.68
Avail Cap(c_a), veh/h	522	0	417	210	220	187	216	1724	904	219	922	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.84	0.84	0.84
Uniform Delay (d), s/veh	37.3	0.0	35.2	43.4	41.2	0.0	46.1	16.1	16.1	43.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	17.0	0.9	0.0	8.1	1.1	2.1	10.7	3.4	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.1	4.6	1.4	0.0	1.6	8.3	9.0	2.3	0.9	0.9
LnGrp Delay(d),s/veh	38.1	0.0	35.2	60.4	42.0	0.0	54.2	17.2	18.2	53.9	3.4	3.3
LnGrp LOS	D		D	E	D		D	B	B	D	A	A
Approach Vol, veh/h		114			195			1412			1347	
Approach Delay, s/veh		38.0			55.3			19.0			6.2	
Approach LOS		D			E			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	77.4		19.8	9.4	76.7		14.1				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	12.0	50.0		28.5	12.0	50.0		11.5				
Max Q Clear Time (g_c+I1), s	4.9	2.0		7.3	6.1	19.2		9.6				
Green Ext Time (p_c), s	0.0	32.6		0.5	0.1	23.6		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			16.4									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

PM Peak Hour
12/10/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Volume (veh/h)	220	1990	1250	90	170	260		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	188.1	188.1	188.1	190.0	188.1	188.1		
Adj Flow Rate, veh/h	239	2163	1359	85	185	137		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	356	3985	2603	163	232	207		
Arrive On Green	0.20	0.78	0.53	0.53	0.13	0.13		
Sat Flow, veh/h	1792	5305	5105	309	1792	1599		
Grp Volume(v), veh/h	239	2163	943	501	185	137		
Grp Sat Flow(s),veh/h/ln	1792	1712	1712	1821	1792	1599		
Q Serve(g_s), s	12.4	16.4	18.1	18.1	10.1	8.2		
Cycle Q Clear(g_c), s	12.4	16.4	18.1	18.1	10.1	8.2		
Prop In Lane	1.00			0.17	1.00	1.00		
Lane Grp Cap(c), veh/h	356	3985	1805	960	232	207		
V/C Ratio(X)	0.67	0.54	0.52	0.52	0.80	0.66		
Avail Cap(c_a), veh/h	356	3985	1805	960	579	517		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	37.2	4.4	15.5	15.5	42.5	41.7		
Incr Delay (d2), s/veh	4.8	0.5	1.1	2.0	6.2	3.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.6	7.8	8.8	9.6	5.4	3.8		
LnGrp Delay(d),s/veh	42.0	4.9	16.6	17.5	48.7	45.2		
LnGrp LOS	D	A	B	B	D	D		
Approach Vol, veh/h		2402	1444		322			
Approach Delay, s/veh		8.6	16.9		47.2			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	44.5	58.0		17.5		102.5		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	20.0	* 53		32.5		78.0		
Max Q Clear Time (g_c+I1), s	14.4	20.1		12.1		18.4		
Green Ext Time (p_c), s	5.1	13.1		0.9		35.7		
Intersection Summary								
HCM 2010 Ctrl Delay			14.5					
HCM 2010 LOS			B					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
 7: Oakland Ave/Driveway & Clayton Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1750	170	250	890	50	230	60	510	80	60	60
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.96		0.93	0.97		0.95
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	184.5	184.5	190.0	190.0	190.0	190.0	190.0	190.0	190.0
Adj Flow Rate, veh/h	116	1842	103	263	937	50	242	63	358	84	63	47
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	0	0	0
Cap, veh/h	148	1844	103	514	1484	79	404	578	459	351	300	224
Arrive On Green	0.08	0.37	0.37	0.15	0.44	0.44	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1792	4968	277	3408	3379	180	1249	1900	1509	953	986	736
Grp Volume(v), veh/h	116	1268	677	263	486	501	242	63	358	84	0	110
Grp Sat Flow(s),veh/h/ln	1792	1712	1821	1704	1752	1806	1249	1900	1509	953	0	1722
Q Serve(g_s), s	5.5	31.9	32.0	6.1	18.6	18.6	15.4	2.1	18.7	6.0	0.0	4.1
Cycle Q Clear(g_c), s	5.5	31.9	32.0	6.1	18.6	18.6	19.5	2.1	18.7	8.1	0.0	4.1
Prop In Lane	1.00		0.15	1.00		0.10	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	148	1271	676	514	770	794	404	578	459	351	0	524
V/C Ratio(X)	0.78	1.00	1.00	0.51	0.63	0.63	0.60	0.11	0.78	0.24	0.00	0.21
Avail Cap(c_a), veh/h	270	1271	676	514	770	794	459	661	525	392	0	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.8	27.1	27.1	33.7	18.8	18.8	29.6	21.6	27.4	24.5	0.0	22.3
Incr Delay (d2), s/veh	8.8	24.7	35.0	3.6	3.9	3.8	1.7	0.1	6.5	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	19.3	22.5	3.1	9.7	10.0	5.5	1.1	8.6	1.6	0.0	2.0
LnGrp Delay(d),s/veh	47.6	51.8	62.1	37.3	22.7	22.5	31.3	21.7	33.9	24.8	0.0	22.5
LnGrp LOS	D	D	F	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		2061			1250			663			194	
Approach Delay, s/veh		54.9			25.7			31.8			23.5	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.1	46.7		31.2	18.0	40.8		31.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	13.0	32.0		30.0	13.0	32.0		30.0				
Max Q Clear Time (g_c+1), s	7.5	20.6		10.1	8.1	34.0		21.5				
Green Ext Time (p_c), s	0.1	10.6		3.7	0.4	0.0		2.6				
Intersection Summary												
HCM 2010 Ctrl Delay			41.0									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh	0.3
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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	50	1240	30	0	1310
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	54	1348	33	0	1424

Major/Minor	Minor1	Minor2	Major1	Major2
Conflicting Flow All	1934	699	0	0
Stage 1	1364	-	-	-
Stage 2	570	-	-	-
Critical Hdwy	5.7	7.1	-	-
Critical Hdwy Stg 1	6.6	-	-	-
Critical Hdwy Stg 2	6	-	-	-
Follow-up Hdwy	3.8	3.9	-	-
Pot Cap-1 Maneuver	104	332	-	-
Stage 1	147	-	-	-
Stage 2	488	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	103	330	-	-
Mov Cap-2 Maneuver	103	-	-	-
Stage 1	147	-	-	-
Stage 2	484	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	330	256	-
HCM Lane V/C Ratio	-	-	0.165	-	-
HCM Control Delay (s)	-	-	18	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	30	10	0	0	0	0	1760	100	90	960	10
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	184.5	190.0				0.0	184.5	190.0	181.0	181.0	190.0
Adj Flow Rate, veh/h	22	33	6				0	1913	0	98	1043	11
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	0				0	3	3	5	5	5
Cap, veh/h	42	63	12				0	3702	0	194	4207	44
Arrive On Green	0.07	0.07	0.07				0.00	0.74	0.00	0.06	0.83	0.83
Sat Flow, veh/h	640	959	174				0	5368	0	3343	5039	53
Grp Volume(v), veh/h	61	0	0				0	1913	0	98	682	372
Grp Sat Flow(s),veh/h/ln	1773	0	0				0	1679	0	1672	1647	1799
Q Serve(g_s), s	3.2	0.0	0.0				0.0	15.6	0.0	2.7	4.1	4.1
Cycle Q Clear(g_c), s	3.2	0.0	0.0				0.0	15.6	0.0	2.7	4.1	4.1
Prop In Lane	0.36		0.10				0.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	117	0	0				0	3702	0	194	2749	1502
V/C Ratio(X)	0.52	0.00	0.00				0.00	0.52	0.00	0.51	0.25	0.25
Avail Cap(c_a), veh/h	379	0	0				0	3702	0	733	2749	1502
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.43	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	0.0	0.0				0.0	5.4	0.0	43.8	1.6	1.6
Incr Delay (d2), s/veh	3.5	0.0	0.0				0.0	0.2	0.0	2.0	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0				0.0	7.2	0.0	1.3	1.9	2.1
LnGrp Delay(d),s/veh	46.8	0.0	0.0				0.0	5.6	0.0	45.8	1.9	2.0
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		61						1913			1152	
Approach Delay, s/veh		46.8						5.6			5.7	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		99.2		10.8	9.6	89.6						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		80.0		20.5	21.0	55.0						
Max Q Clear Time (g_c+I1), s		6.1		5.2	4.7	17.6						
Green Ext Time (p_c), s		52.6		0.0	0.2	31.1						
Intersection Summary												
HCM 2010 Ctrl Delay			6.5									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	310	70	220	850	310	130	1440	140	110	780	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	188.1	188.1	188.1	184.5	184.5	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	76	337	71	239	924	257	141	1565	152	120	848	33
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	97	828	172	143	1105	483	174	1722	167	150	1760	68
Arrive On Green	0.05	0.28	0.28	0.08	0.31	0.31	0.10	0.37	0.37	0.03	0.12	0.12
Sat Flow, veh/h	1774	2912	606	1792	3574	1562	1757	4660	452	1740	4926	191
Grp Volume(v), veh/h	76	203	205	239	924	257	141	1127	590	120	572	309
Grp Sat Flow(s),veh/h/ln	1774	1770	1748	1792	1787	1562	1757	1679	1755	1740	1663	1792
Q Serve(g_s), s	4.2	9.3	9.5	8.0	24.1	13.6	7.9	31.9	32.0	6.9	16.1	16.2
Cycle Q Clear(g_c), s	4.2	9.3	9.5	8.0	24.1	13.6	7.9	31.9	32.0	6.9	16.1	16.2
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.26	1.00		0.11
Lane Grp Cap(c), veh/h	97	503	497	143	1105	483	174	1241	649	150	1188	640
V/C Ratio(X)	0.78	0.40	0.41	1.67	0.84	0.53	0.81	0.91	0.91	0.80	0.48	0.48
Avail Cap(c_a), veh/h	142	583	576	143	1178	515	333	1241	649	243	1188	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.55	0.55	0.55	0.98	0.98	0.98
Uniform Delay (d), s/veh	46.7	29.0	29.1	46.1	32.2	28.6	44.2	29.9	30.0	47.8	35.5	35.5
Incr Delay (d2), s/veh	15.4	0.5	0.5	329.8	5.1	0.9	5.0	6.8	11.9	9.0	1.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.6	4.7	17.1	12.6	6.0	4.1	15.9	17.6	3.7	7.7	8.5
LnGrp Delay(d),s/veh	62.1	29.5	29.6	375.9	37.4	29.5	49.2	36.7	41.9	56.8	36.8	38.0
LnGrp LOS	E	C	C	F	D	C	D	D	D	E	D	D
Approach Vol, veh/h		484			1420			1858			1001	
Approach Delay, s/veh		34.7			92.9			39.3			39.6	
Approach LOS		C			F			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	33.4	13.9	50.7	9.5	35.9	12.7	51.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	8.0	33.0	19.0	32.0	8.0	33.0	14.0	37.0				
Max Q Clear Time (g_c+l1), s	10.0	11.5	9.9	18.2	6.2	26.1	8.9	34.0				
Green Ext Time (p_c), s	0.0	10.7	0.2	12.0	0.0	4.8	0.1	2.9				
Intersection Summary												
HCM 2010 Ctrl Delay			54.9									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

AM Peak Hour
 12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑	↑	↑	↑↑			↑↑↑	
Volume (veh/h)	0	0	0	330	1430	590	220	1150	0	0	970	100
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	184.5	184.5	182.7	182.7	0.0	190.0	181.0	190.0
Adj Flow Rate, veh/h				344	1490	441	229	1198	0	0	1010	75
Adj No. of Lanes				0	3	1	1	2	0	0	3	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	4	4	0	5	5	5
Cap, veh/h				317	1488	537	259	1956	0	0	1774	132
Arrive On Green				0.35	0.35	0.35	0.15	0.56	0.00	0.00	0.76	0.76
Sat Flow, veh/h				906	4250	1535	1740	3563	0	0	4854	348
Grp Volume(v), veh/h				683	1151	441	229	1198	0	0	709	376
Grp Sat Flow(s),veh/h/ln				1799	1679	1535	1740	1736	0	0	1647	1745
Q Serve(g_s), s				38.5	37.3	28.8	14.2	25.3	0.0	0.0	10.1	10.2
Cycle Q Clear(g_c), s				38.5	37.3	28.8	14.2	25.3	0.0	0.0	10.1	10.2
Prop In Lane				0.50		1.00	1.00		0.00	0.00		0.20
Lane Grp Cap(c), veh/h				630	1175	537	259	1956	0	0	1245	660
V/C Ratio(X)				1.08	0.98	0.82	0.88	0.61	0.00	0.00	0.57	0.57
Avail Cap(c_a), veh/h				630	1175	537	316	1956	0	0	1245	660
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)				1.00	1.00	1.00	0.74	0.74	0.00	0.00	0.53	0.53
Uniform Delay (d), s/veh				35.8	35.4	32.6	45.9	16.0	0.0	0.0	9.6	9.6
Incr Delay (d2), s/veh				61.0	21.4	9.8	16.6	1.1	0.0	0.0	1.0	1.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				29.7	20.7	13.6	8.0	12.3	0.0	0.0	4.5	4.9
LnGrp Delay(d),s/veh				96.7	56.7	42.4	62.4	17.1	0.0	0.0	10.6	11.5
LnGrp LOS				F	E	D	E	B			B	B
Approach Vol, veh/h					2275			1427			1085	
Approach Delay, s/veh					66.0			24.3			10.9	
Approach LOS					E			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	20.4	46.6		43.0		67.0						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	20.0	38.0		38.5		62.0						
Max Q Clear Time (g_c+l1), s	16.2	12.2		40.5		27.3						
Green Ext Time (p_c), s	0.2	18.8		0.0		23.1						
Intersection Summary												
HCM 2010 Ctrl Delay					41.1							
HCM 2010 LOS					D							

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↑					↑↑↑	↑	↑↑	↑↑↑	
Volume (veh/h)	180	960	200	0	0	0	0	1190	150	340	960	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	182.7	182.7				0.0	182.7	182.7	182.7	182.7	0.0
Adj Flow Rate, veh/h	196	1043	157				0	1293	128	370	1043	0
Adj No. of Lanes	0	4	1				0	3	1	2	3	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	249	1437	383				0	2131	644	570	3222	0
Arrive On Green	0.26	0.26	0.26				0.00	0.43	0.43	0.34	1.00	0.00
Sat Flow, veh/h	959	5534	1476				0	5152	1507	3375	5152	0
Grp Volume(v), veh/h	364	875	157				0	1293	128	370	1043	0
Grp Sat Flow(s),veh/h/ln	1779	1571	1476				0	1663	1507	1688	1663	0
Q Serve(g_s), s	19.1	17.0	8.9				0.0	20.2	5.4	9.4	0.0	0.0
Cycle Q Clear(g_c), s	19.1	17.0	8.9				0.0	20.2	5.4	9.4	0.0	0.0
Prop In Lane	0.54		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	462	1224	383				0	2131	644	570	3222	0
V/C Ratio(X)	0.79	0.72	0.41				0.00	0.61	0.20	0.65	0.32	0.00
Avail Cap(c_a), veh/h	628	1663	521				0	2131	644	570	3222	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.80	0.80	0.74	0.74	0.00
Uniform Delay (d), s/veh	34.7	33.9	30.9				0.0	22.3	18.0	30.8	0.0	0.0
Incr Delay (d2), s/veh	4.7	0.9	0.7				0.0	1.0	0.6	1.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	7.5	7.7				0.0	9.4	2.3	4.4	0.1	0.0
LnGrp Delay(d),s/veh	39.4	34.8	31.6				0.0	23.3	18.6	32.7	0.2	0.0
LnGrp LOS	D	C	C					C	B	C	A	
Approach Vol, veh/h		1396						1421			1413	
Approach Delay, s/veh		35.6						22.9			8.7	
Approach LOS		D						C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		79.4		30.6	31.4	48.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		65.0		35.5	17.0	* 43						
Max Q Clear Time (g_c+l1), s		2.0		21.1	11.4	22.2						
Green Ext Time (p_c), s		12.5		0.0	3.8	10.3						
Intersection Summary												
HCM 2010 Ctrl Delay			22.4									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 5: Galindo St & Laguna St/Oak St

AM Peak Hour
 12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	80	20	80	40	130	40	1190	120	140	1070	40
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3	181.0	181.0	181.0	182.7	182.7	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	22	87	12	87	43	0	43	1293	129	152	1163	42
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	5	5	5	4	4	4	4	4	4
Cap, veh/h	84	331	314	123	129	110	78	1765	176	187	1527	55
Arrive On Green	0.22	0.22	0.22	0.07	0.07	0.00	0.05	0.38	0.38	0.21	0.89	0.89
Sat Flow, veh/h	372	1472	1396	1723	1810	1538	1740	4588	458	1740	3415	123
Grp Volume(v), veh/h	109	0	12	87	43	0	43	937	485	152	591	614
Grp Sat Flow(s),veh/h/ln	1844	0	1396	1723	1810	1538	1740	1663	1721	1740	1736	1802
Q Serve(g_s), s	4.1	0.0	0.6	4.2	1.9	0.0	2.1	20.5	20.5	7.1	9.6	9.6
Cycle Q Clear(g_c), s	4.1	0.0	0.6	4.2	1.9	0.0	2.1	20.5	20.5	7.1	9.6	9.6
Prop In Lane	0.20		1.00	1.00		1.00	1.00		0.27	1.00		0.07
Lane Grp Cap(c), veh/h	415	0	314	123	129	110	78	1279	662	187	776	806
V/C Ratio(X)	0.26	0.00	0.04	0.71	0.33	0.00	0.55	0.73	0.73	0.81	0.76	0.76
Avail Cap(c_a), veh/h	640	0	485	233	245	208	266	1279	662	491	776	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	27.1	0.0	25.8	38.6	37.5	0.0	39.7	22.4	22.4	32.6	3.0	3.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	7.2	1.5	0.0	5.9	3.7	7.0	7.8	6.6	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.2	2.3	1.0	0.0	1.1	10.0	11.0	3.7	5.2	5.3
LnGrp Delay(d),s/veh	27.5	0.0	25.8	45.8	39.0	0.0	45.6	26.2	29.5	40.4	9.6	9.4
LnGrp LOS	C		C	D	D		D	C	C	D	A	A
Approach Vol, veh/h		121			130			1465			1357	
Approach Delay, s/veh		27.3			43.6			27.8			12.9	
Approach LOS		C			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	68.0		23.6	13.1	62.7		10.6				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	13.0	38.0		29.5	24.0	27.0		11.5				
Max Q Clear Time (g_c+l1), s	4.1	11.6		6.1	9.1	22.5		6.2				
Green Ext Time (p_c), s	0.0	20.9		0.6	0.3	4.2		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			21.9									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 6: Clayton Rd & Fry Way

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Volume (veh/h)	130	1390	1680	60	60	150		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	184.5	184.5	186.3	190.0	184.5	184.5		
Adj Flow Rate, veh/h	141	1511	1826	53	65	86		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	282	4039	2942	85	142	126		
Arrive On Green	0.16	0.80	0.58	0.58	0.08	0.08		
Sat Flow, veh/h	1757	5202	5240	147	1757	1568		
Grp Volume(v), veh/h	141	1511	1220	659	65	86		
Grp Sat Flow(s),veh/h/ln	1757	1679	1695	1829	1757	1568		
Q Serve(g_s), s	5.9	6.9	19.1	19.2	2.9	4.3		
Cycle Q Clear(g_c), s	5.9	6.9	19.1	19.2	2.9	4.3		
Prop In Lane	1.00			0.08	1.00	1.00		
Lane Grp Cap(c), veh/h	282	4039	1966	1061	142	126		
V/C Ratio(X)	0.50	0.37	0.62	0.62	0.46	0.68		
Avail Cap(c_a), veh/h	282	4039	1966	1061	770	687		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	31.1	2.3	11.2	11.2	35.6	36.2		
Incr Delay (d2), s/veh	1.4	0.3	1.5	2.7	2.3	6.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.0	3.2	9.2	10.3	1.5	2.1		
LnGrp Delay(d),s/veh	32.4	2.5	12.6	13.9	37.9	42.5		
LnGrp LOS	C	A	B	B	D	D		
Approach Vol, veh/h		1652	1879		151			
Approach Delay, s/veh		5.1	13.1		40.5			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	47.0	52.0		11.0		99.0		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	13.0	* 47		35.5		65.0		
Max Q Clear Time (g_c+I1), s	7.9	21.2		6.3		8.9		
Green Ext Time (p_c), s	4.0	16.1		0.4		18.6		
Intersection Summary								
HCM 2010 Ctrl Delay			10.6					
HCM 2010 LOS			B					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	740	180	590	1780	20	130	30	190	20	60	20
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.98	0.93		0.92	0.93		0.91
Parking Bus, 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
Adj Sat Flow, veh/h/ln	179.2	179.2	190.0	188.1	188.1	190.0	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	33	804	106	641	1935	22	141	33	103	22	65	22
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	1	1	1	2	2	2	2	2	2
Cap, veh/h	66	1299	170	747	1720	20	413	567	443	428	394	133
Arrive On Green	0.04	0.30	0.30	0.22	0.48	0.48	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1707	4346	568	3476	3619	41	1217	1863	1455	1166	1295	438
Grp Volume(v), veh/h	33	602	308	641	953	1004	141	33	103	22	0	87
Grp Sat Flow(s), veh/h/ln	1707	1631	1652	1738	1787	1873	1217	1863	1455	1166	0	1733
Q Serve(g_s), s	1.6	13.1	13.3	14.7	39.2	39.2	7.9	1.0	4.4	1.1	0.0	3.0
Cycle Q Clear(g_c), s	1.6	13.1	13.3	14.7	39.2	39.2	11.0	1.0	4.4	2.2	0.0	3.0
Prop In Lane	1.00		0.34	1.00		0.02	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	66	975	494	747	849	890	413	567	443	428	0	528
V/C Ratio(X)	0.50	0.62	0.62	0.86	1.12	1.13	0.34	0.06	0.23	0.05	0.00	0.16
Avail Cap(c_a), veh/h	165	1027	520	884	849	890	455	632	494	468	0	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.9	24.9	25.0	31.2	21.7	21.7	25.0	20.3	21.5	21.1	0.0	21.0
Incr Delay (d2), s/veh	5.8	1.0	2.2	7.4	70.4	71.7	0.5	0.0	0.3	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.0	6.4	7.8	35.7	37.8	2.7	0.5	1.8	0.4	0.0	1.5
LnGrp Delay(d),s/veh	44.7	25.9	27.1	38.6	92.1	93.4	25.5	20.4	21.8	21.1	0.0	21.2
LnGrp LOS	D	C	C	D	F	F	C	C	C	C		C
Approach Vol, veh/h		943			2598			277			109	
Approach Delay, s/veh		27.0			79.4			23.5			21.2	
Approach LOS		C			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	44.2		30.1	22.8	29.7		30.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	39.0		28.0	21.0	26.0		28.0				
Max Q Clear Time (g_c+I1), s	3.6	41.2		5.0	16.7	15.3		13.0				
Green Ext Time (p_c), s	0.0	0.0		1.6	1.1	9.4		1.4				
Intersection Summary												
HCM 2010 Ctrl Delay				61.2								
HCM 2010 LOS				E								

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	40	1280	40	0	1200
Conflicting Peds, #/hr	0	0	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	4	4	4	4
Mvmt Flow	0	43	1391	43	0	1304

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1935	723	1435
Stage 1	1413	-	-
Stage 2	522	-	-
Critical Hdwy	5.7	7.1	5.38
Critical Hdwy Stg 1	6.6	-	-
Critical Hdwy Stg 2	6	-	-
Follow-up Hdwy	3.8	3.9	3.14
Pot Cap-1 Maneuver	104	320	235
Stage 1	137	-	-
Stage 2	516	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	103	318	234
Mov Cap-2 Maneuver	103	-	-
Stage 1	137	-	-
Stage 2	513	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	318	234	-
HCM Lane V/C Ratio	-	-	0.137	-	-
HCM Control Delay (s)	-	-	18.1	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	50	30	0	0	0	0	1430	90	220	1620	50
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	190.0	190.0				0.0	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	53	53	24				0	1505	0	232	1705	49
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	2	2	1	1	1
Cap, veh/h	78	78	35				0	3449	0	313	4128	119
Arrive On Green	0.11	0.11	0.11				0.00	0.68	0.00	0.09	0.81	0.81
Sat Flow, veh/h	727	727	329				0	5421	0	3476	5128	147
Grp Volume(v), veh/h	130	0	0				0	1505	0	232	1138	616
Grp Sat Flow(s),veh/h/ln	1784	0	0				0	1695	0	1738	1712	1851
Q Serve(g_s), s	7.6	0.0	0.0				0.0	14.6	0.0	7.0	10.5	10.5
Cycle Q Clear(g_c), s	7.6	0.0	0.0				0.0	14.6	0.0	7.0	10.5	10.5
Prop In Lane	0.41		0.18				0.00		0.00	1.00		0.08
Lane Grp Cap(c), veh/h	191	0	0				0	3449	0	313	2756	1490
V/C Ratio(X)	0.68	0.00	0.00				0.00	0.44	0.00	0.74	0.41	0.41
Avail Cap(c_a), veh/h	388	0	0				0	3449	0	836	2756	1490
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.42	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	0.0	0.0				0.0	8.0	0.0	48.0	3.1	3.1
Incr Delay (d2), s/veh	4.2	0.0	0.0				0.0	0.2	0.0	3.5	0.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0				0.0	6.9	0.0	3.5	5.1	5.7
LnGrp Delay(d),s/veh	50.7	0.0	0.0				0.0	8.1	0.0	51.4	3.5	3.9
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		130						1505			1986	
Approach Delay, s/veh		50.7						8.1			9.3	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		103.9		16.1	13.7	90.2						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		87.0		23.5	26.0	57.0						
Max Q Clear Time (g_c+I1), s		12.5		9.6	9.0	16.6						
Green Ext Time (p_c), s		58.0		0.0	0.7	35.0						
Intersection Summary												
HCM 2010 Ctrl Delay				10.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	770	150	130	480	240	180	1170	290	270	1230	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	188.1	188.1	188.1	188.1	188.1	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	112	786	145	133	490	182	184	1194	284	276	1255	50
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	91	835	154	91	997	435	212	1437	342	303	2020	80
Arrive On Green	0.05	0.28	0.28	0.05	0.28	0.28	0.12	0.35	0.35	0.34	0.80	0.80
Sat Flow, veh/h	1792	2992	552	1792	3574	1558	1792	4123	981	1792	5065	202
Grp Volume(v), veh/h	112	469	462	133	490	182	184	991	487	276	848	457
Grp Sat Flow(s),veh/h/ln	1792	1787	1757	1792	1787	1558	1792	1712	1680	1792	1712	1843
Q Serve(g_s), s	6.0	30.3	30.3	6.0	13.5	11.2	11.9	31.3	31.3	17.4	11.7	11.7
Cycle Q Clear(g_c), s	6.0	30.3	30.3	6.0	13.5	11.2	11.9	31.3	31.3	17.4	11.7	11.7
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.58	1.00		0.11
Lane Grp Cap(c), veh/h	91	499	490	91	997	435	212	1193	585	303	1366	735
V/C Ratio(X)	1.23	0.94	0.94	1.46	0.49	0.42	0.87	0.83	0.83	0.91	0.62	0.62
Avail Cap(c_a), veh/h	91	501	492	91	1001	436	243	1193	585	426	1366	735
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68	0.91	0.91	0.91
Uniform Delay (d), s/veh	55.9	41.5	41.5	55.9	35.5	34.7	51.0	35.2	35.2	38.2	8.3	8.3
Incr Delay (d2), s/veh	167.5	26.3	26.6	256.5	0.4	0.6	17.8	4.7	9.1	17.4	1.9	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	18.5	18.2	9.4	6.7	4.9	6.9	15.5	15.9	9.9	5.6	6.3
LnGrp Delay(d),s/veh	223.4	67.8	68.2	312.4	35.9	35.3	68.9	39.9	44.4	55.6	10.3	11.9
LnGrp LOS	F	E	E	F	D	D	E	D	D	E	B	B
Approach Vol, veh/h		1043			805			1662			1581	
Approach Delay, s/veh		84.7			81.4			44.4			18.7	
Approach LOS		F			F			D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	37.9	18.0	54.2	10.0	37.9	23.9	48.2				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	6.0	33.0	16.0	47.0	6.0	33.0	28.0	35.0				
Max Q Clear Time (g_c+I1), s	8.0	32.3	13.9	13.7	8.0	15.5	19.4	33.3				
Green Ext Time (p_c), s	0.0	0.6	0.1	26.3	0.0	9.6	0.5	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			50.5									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑	↑	↑	↑↑			↑↑↑	
Volume (veh/h)	0	0	0	240	880	480	240	1150	0	0	1420	80
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	188.1	188.1	188.1	188.1	0.0	190.0	188.1	190.0
Adj Flow Rate, veh/h				255	936	334	255	1223	0	0	1511	72
Adj No. of Lanes				0	3	1	1	2	0	0	3	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	1	1	1	1	0	1	1	1
Cap, veh/h				275	1091	404	288	2340	0	0	2298	109
Arrive On Green				0.26	0.26	0.26	0.16	0.65	0.00	0.00	0.92	0.92
Sat Flow, veh/h				1058	4194	1553	1792	3668	0	0	5187	239
Grp Volume(v), veh/h				440	751	334	255	1223	0	0	1031	552
Grp Sat Flow(s),veh/h/ln				1828	1712	1553	1792	1787	0	0	1712	1833
Q Serve(g_s), s				26.2	23.2	22.6	15.5	20.0	0.0	0.0	7.1	7.1
Cycle Q Clear(g_c), s				26.2	23.2	22.6	15.5	20.0	0.0	0.0	7.1	7.1
Prop In Lane				0.58		1.00	1.00		0.00	0.00		0.13
Lane Grp Cap(c), veh/h				476	891	404	288	2340	0	0	1568	839
V/C Ratio(X)				0.93	0.84	0.83	0.89	0.52	0.00	0.00	0.66	0.66
Avail Cap(c_a), veh/h				615	1151	522	386	2340	0	0	1568	839
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.62	0.62	0.00	0.00	0.62	0.62
Uniform Delay (d), s/veh				40.2	39.1	38.9	45.8	10.1	0.0	0.0	2.8	2.8
Incr Delay (d2), s/veh				17.3	4.6	8.3	11.5	0.5	0.0	0.0	1.3	2.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				15.5	11.5	10.6	8.6	10.0	0.0	0.0	3.2	3.7
LnGrp Delay(d),s/veh				57.5	43.7	47.2	57.3	10.6	0.0	0.0	4.2	5.3
LnGrp LOS				E	D	D	E	B			A	A
Approach Vol, veh/h					1525			1478			1583	
Approach Delay, s/veh					48.4			18.7			4.6	
Approach LOS					D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	21.9	64.6		33.5		86.5						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	24.0	45.0		37.5		73.0						
Max Q Clear Time (g_c+1), s	17.5	9.1		28.2		22.0						
Green Ext Time (p_c), s	0.4	28.7		0.1		37.5						
Intersection Summary												
HCM 2010 Ctrl Delay					23.7							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
4: Galindo St & Clayton Rd

PM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↑					↑↑↑	↑	↑↑	↑↑↑	
Volume (veh/h)	180	1480	330	0	0	0	0	1220	230	700	970	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3				0.0	188.1	188.1	188.1	188.1	0.0
Adj Flow Rate, veh/h	191	1574	305				0	1298	224	745	1032	0
Adj No. of Lanes	0	4	1				0	3	1	2	3	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	1	1	1	1	0
Cap, veh/h	199	1770	450				0	1816	542	790	3200	0
Arrive On Green	0.30	0.30	0.30				0.00	0.35	0.35	0.45	1.00	0.00
Sat Flow, veh/h	671	5964	1516				0	5305	1532	3476	5305	0
Grp Volume(v), veh/h	521	1244	305				0	1298	224	745	1032	0
Grp Sat Flow(s),veh/h/ln	1829	1602	1516				0	1712	1532	1738	1712	0
Q Serve(g_s), s	33.2	29.2	21.0				0.0	26.0	13.1	24.3	0.0	0.0
Cycle Q Clear(g_c), s	33.2	29.2	21.0				0.0	26.0	13.1	24.3	0.0	0.0
Prop In Lane	0.37		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	543	1427	450				0	1816	542	790	3200	0
V/C Ratio(X)	0.96	0.87	0.68				0.00	0.71	0.41	0.94	0.32	0.00
Avail Cap(c_a), veh/h	562	1477	466				0	1816	542	790	3200	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	1.00	1.00				0.00	0.86	0.86	0.53	0.53	0.00
Uniform Delay (d), s/veh	41.0	39.6	36.8				0.0	33.2	29.0	31.6	0.0	0.0
Incr Delay (d2), s/veh	27.5	5.9	3.8				0.0	2.1	2.0	12.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.9	13.7	17.5				0.0	12.6	5.8	12.8	0.0	0.0
LnGrp Delay(d),s/veh	68.5	45.5	40.5				0.0	35.3	31.0	43.9	0.1	0.0
LnGrp LOS	E	D	D					D	C	D	A	
Approach Vol, veh/h		2070						1522			1777	
Approach Delay, s/veh		50.5						34.7			18.5	
Approach LOS		D						C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		80.3		39.7	33.3	47.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		74.0		36.5	27.0	* 42						
Max Q Clear Time (g_c+I1), s		2.0		35.2	26.3	28.0						
Green Ext Time (p_c), s		16.0		0.0	0.6	8.4						
Intersection Summary												
HCM 2010 Ctrl Delay			35.4									
HCM 2010 LOS			D									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
5: Galindo St & Laguna St/Oak St

PM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	50	20	130	50	260	50	1160	90	70	1110	60
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		0.96	1.00		0.96
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	184.5	184.5	188.1	188.1	188.1	186.3	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	54	54	6	141	54	0	54	1261	97	76	1207	64
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	1	1	2	2	2	1	1	1
Cap, veh/h	140	140	224	176	185	157	83	2440	188	98	1777	94
Arrive On Green	0.16	0.16	0.16	0.10	0.10	0.00	0.05	0.51	0.51	0.11	1.00	1.00
Sat Flow, veh/h	900	900	1438	1792	1881	1599	1774	4799	369	1792	3444	182
Grp Volume(v), veh/h	108	0	6	141	54	0	54	891	467	76	626	645
Grp Sat Flow(s),veh/h/ln	1800	0	1438	1792	1881	1599	1774	1695	1778	1792	1787	1840
Q Serve(g_s), s	5.3	0.0	0.3	7.6	2.6	0.0	2.9	17.2	17.2	4.1	0.0	0.0
Cycle Q Clear(g_c), s	5.3	0.0	0.3	7.6	2.6	0.0	2.9	17.2	17.2	4.1	0.0	0.0
Prop In Lane	0.50		1.00	1.00		1.00	1.00		0.21	1.00		0.10
Lane Grp Cap(c), veh/h	281	0	224	176	185	157	83	1724	904	98	922	949
V/C Ratio(X)	0.38	0.00	0.03	0.80	0.29	0.00	0.65	0.52	0.52	0.78	0.68	0.68
Avail Cap(c_a), veh/h	522	0	417	210	220	187	216	1724	904	219	922	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	37.3	0.0	35.2	43.4	41.2	0.0	46.1	16.1	16.1	43.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	17.0	0.9	0.0	8.1	1.1	2.1	11.5	3.7	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.1	4.6	1.4	0.0	1.6	8.3	9.0	2.3	0.9	0.9
LnGrp Delay(d),s/veh	38.1	0.0	35.2	60.4	42.0	0.0	54.2	17.2	18.2	54.7	3.7	3.6
LnGrp LOS	D		D	E	D		D	B	B	D	A	A
Approach Vol, veh/h		114			195			1412			1347	
Approach Delay, s/veh		38.0			55.3			19.0			6.5	
Approach LOS		D			E			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	77.4		19.8	9.4	76.7		14.1				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	12.0	50.0		28.5	12.0	50.0		11.5				
Max Q Clear Time (g_c+I1), s	4.9	2.0		7.3	6.1	19.2		9.6				
Green Ext Time (p_c), s	0.0	32.6		0.5	0.1	23.6		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			16.5									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

PM Peak Hour
12/10/2013

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		  	  					
Volume (veh/h)	220	1990	1250	90	170	260		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	188.1	188.1	188.1	190.0	188.1	188.1		
Adj Flow Rate, veh/h	239	2163	1359	85	185	137		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	356	3985	2603	163	232	207		
Arrive On Green	0.20	0.78	0.53	0.53	0.13	0.13		
Sat Flow, veh/h	1792	5305	5105	309	1792	1599		
Grp Volume(v), veh/h	239	2163	943	501	185	137		
Grp Sat Flow(s),veh/h/ln	1792	1712	1712	1821	1792	1599		
Q Serve(g_s), s	12.4	16.4	18.1	18.1	10.1	8.2		
Cycle Q Clear(g_c), s	12.4	16.4	18.1	18.1	10.1	8.2		
Prop In Lane	1.00			0.17	1.00	1.00		
Lane Grp Cap(c), veh/h	356	3985	1805	960	232	207		
V/C Ratio(X)	0.67	0.54	0.52	0.52	0.80	0.66		
Avail Cap(c_a), veh/h	356	3985	1805	960	579	517		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	37.2	4.4	15.5	15.5	42.5	41.7		
Incr Delay (d2), s/veh	4.8	0.5	1.1	2.0	6.2	3.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.6	7.8	8.8	9.6	5.4	3.8		
LnGrp Delay(d),s/veh	42.0	4.9	16.6	17.5	48.7	45.2		
LnGrp LOS	D	A	B	B	D	D		
Approach Vol, veh/h		2402	1444		322			
Approach Delay, s/veh		8.6	16.9		47.2			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	44.5	58.0		17.5		102.5		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	20.0	* 53		32.5		78.0		
Max Q Clear Time (g_c+I1), s	14.4	20.1		12.1		18.4		
Green Ext Time (p_c), s	5.1	13.1		0.9		35.7		
Intersection Summary								
HCM 2010 Ctrl Delay			14.5					
HCM 2010 LOS			B					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

PM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1750	170	250	890	50	230	60	510	80	60	60
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.96		0.93	0.97		0.95
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	184.5	184.5	190.0	190.0	190.0	190.0	190.0	190.0	190.0
Adj Flow Rate, veh/h	116	1842	103	263	937	50	242	63	358	84	63	47
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	0	0	0
Cap, veh/h	148	1844	103	514	1484	79	404	578	459	351	300	224
Arrive On Green	0.08	0.37	0.37	0.15	0.44	0.44	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1792	4968	277	3408	3379	180	1249	1900	1509	953	986	736
Grp Volume(v), veh/h	116	1268	677	263	486	501	242	63	358	84	0	110
Grp Sat Flow(s),veh/h/ln	1792	1712	1821	1704	1752	1806	1249	1900	1509	953	0	1722
Q Serve(g_s), s	5.5	31.9	32.0	6.1	18.6	18.6	15.4	2.1	18.7	6.0	0.0	4.1
Cycle Q Clear(g_c), s	5.5	31.9	32.0	6.1	18.6	18.6	19.5	2.1	18.7	8.1	0.0	4.1
Prop In Lane	1.00		0.15	1.00		0.10	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	148	1271	676	514	770	794	404	578	459	351	0	524
V/C Ratio(X)	0.78	1.00	1.00	0.51	0.63	0.63	0.60	0.11	0.78	0.24	0.00	0.21
Avail Cap(c_a), veh/h	270	1271	676	514	770	794	459	661	525	392	0	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.8	27.1	27.1	33.7	18.8	18.8	29.6	21.6	27.4	24.5	0.0	22.3
Incr Delay (d2), s/veh	8.8	24.7	35.0	3.6	3.9	3.8	1.7	0.1	6.5	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	19.3	22.5	3.1	9.7	10.0	5.5	1.1	8.6	1.6	0.0	2.0
LnGrp Delay(d),s/veh	47.6	51.8	62.1	37.3	22.7	22.5	31.3	21.7	33.9	24.8	0.0	22.5
LnGrp LOS	D	D	F	D	C	C	C	C	C	C		C
Approach Vol, veh/h		2061			1250			663			194	
Approach Delay, s/veh		54.9			25.7			31.8			23.5	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.1	46.7		31.2	18.0	40.8		31.2				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	13.0	32.0		30.0	13.0	32.0		30.0				
Max Q Clear Time (g_c+I1), s	7.5	20.6		10.1	8.1	34.0		21.5				
Green Ext Time (p_c), s	0.1	10.6		3.7	0.4	0.0		2.6				
Intersection Summary												
HCM 2010 Ctrl Delay				41.0								
HCM 2010 LOS				D								

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	50	1240	30	0	1310
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	54	1348	33	0	1424

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1934	699	0
Stage 1	1364	-	-
Stage 2	570	-	-
Critical Hdwy	5.7	7.1	5.32
Critical Hdwy Stg 1	6.6	-	-
Critical Hdwy Stg 2	6	-	-
Follow-up Hdwy	3.8	3.9	3.11
Pot Cap-1 Maneuver	104	332	258
Stage 1	147	-	-
Stage 2	488	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	103	330	256
Mov Cap-2 Maneuver	103	-	-
Stage 1	147	-	-
Stage 2	484	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	330	256	-
HCM Lane V/C Ratio	-	-	0.165	-	-
HCM Control Delay (s)	-	-	18	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	30	10	0	0	0	0	1760	100	90	960	10
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	184.5	190.0				0.0	184.5	190.0	181.0	181.0	190.0
Adj Flow Rate, veh/h	22	33	6				0	1913	0	98	1043	11
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	0				0	3	3	5	5	5
Cap, veh/h	44	66	12				0	3598	0	208	4144	44
Arrive On Green	0.07	0.07	0.07				0.00	0.71	0.00	0.06	0.82	0.82
Sat Flow, veh/h	640	959	174				0	5368	0	3343	5039	53
Grp Volume(v), veh/h	61	0	0				0	1913	0	98	682	372
Grp Sat Flow(s),veh/h/ln	1774	0	0				0	1679	0	1672	1647	1799
Q Serve(g_s), s	2.9	0.0	0.0				0.0	15.3	0.0	2.5	4.1	4.1
Cycle Q Clear(g_c), s	2.9	0.0	0.0				0.0	15.3	0.0	2.5	4.1	4.1
Prop In Lane	0.36		0.10				0.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	123	0	0				0	3598	0	208	2708	1480
V/C Ratio(X)	0.50	0.00	0.00				0.00	0.53	0.00	0.47	0.25	0.25
Avail Cap(c_a), veh/h	375	0	0				0	3598	0	726	2708	1480
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.22	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	0.0				0.0	5.8	0.0	39.7	1.7	1.7
Incr Delay (d2), s/veh	3.1	0.0	0.0				0.0	0.1	0.0	1.7	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0				0.0	6.9	0.0	1.2	1.9	2.1
LnGrp Delay(d),s/veh	42.4	0.0	0.0				0.0	5.9	0.0	41.3	2.0	2.2
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		61						1913			1152	
Approach Delay, s/veh		42.4						5.9			5.4	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		89.4		10.6	9.4	80.0						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		72.0		18.5	19.0	49.0						
Max Q Clear Time (g_c+I1), s		6.1		4.9	4.5	17.3						
Green Ext Time (p_c), s		48.6		0.0	0.2	27.0						
Intersection Summary												
HCM 2010 Ctrl Delay			6.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	310	70	220	850	310	130	1440	140	110	780	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	188.1	188.1	188.1	184.5	184.5	190.0	182.7	182.7	182.7
Adj Flow Rate, veh/h	76	337	71	239	924	257	141	1565	152	120	848	33
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	98	550	114	324	1126	492	173	1599	155	152	1114	496
Arrive On Green	0.06	0.19	0.19	0.18	0.32	0.32	0.10	0.34	0.34	0.03	0.11	0.11
Sat Flow, veh/h	1774	2909	605	1792	3574	1563	1757	4660	452	1740	3471	1544
Grp Volume(v), veh/h	76	203	205	239	924	257	141	1127	590	120	848	33
Grp Sat Flow(s),veh/h/ln	1774	1770	1745	1792	1787	1563	1757	1679	1755	1740	1736	1544
Q Serve(g_s), s	3.8	9.5	9.7	11.4	21.6	8.9	7.1	30.0	30.1	6.2	21.5	1.7
Cycle Q Clear(g_c), s	3.8	9.5	9.7	11.4	21.6	8.9	7.1	30.0	30.1	6.2	21.5	1.7
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	98	335	330	324	1126	492	173	1152	602	152	1114	496
V/C Ratio(X)	0.78	0.61	0.62	0.74	0.82	0.52	0.81	0.98	0.98	0.79	0.76	0.07
Avail Cap(c_a), veh/h	196	548	541	324	1226	536	214	1152	602	270	1114	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.50	0.50	0.50	0.98	0.98	0.98
Uniform Delay (d), s/veh	42.1	33.6	33.7	35.0	28.6	13.4	39.9	29.4	29.4	43.0	37.0	28.2
Incr Delay (d2), s/veh	12.2	1.8	1.9	8.5	4.3	0.9	9.5	14.3	21.6	8.5	4.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	4.8	4.8	6.4	11.3	4.4	3.9	16.1	18.0	3.3	11.1	0.8
LnGrp Delay(d),s/veh	54.4	35.3	35.6	43.5	32.9	14.3	49.4	43.7	50.9	51.5	41.8	28.5
LnGrp LOS	D	D	D	D	C	B	D	D	D	D	D	C
Approach Vol, veh/h		484			1420			1858			1001	
Approach Delay, s/veh		38.4			31.3			46.4			42.6	
Approach LOS		D			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.4	22.1	23.5	34.0	9.0	33.5	11.9	45.6				
Change Period (Y+Rc), s	4.0	5.0	5.0	* 5	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	13.0	28.0	11.0	* 29	10.0	31.0	14.0	27.0				
Max Q Clear Time (g_c+I1), s	13.4	11.7	9.1	23.5	5.8	23.6	8.2	32.1				
Green Ext Time (p_c), s	0.0	2.2	0.1	2.7	0.1	4.1	0.1	0.0				

Intersection Summary

HCM 2010 Ctrl Delay	40.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
3: Galindo St & Concord Blvd

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	330	1430	590	220	1150	0	0	970	100
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				184.5	184.5	184.5	182.7	182.7	0.0	190.0	181.0	181.0
Adj Flow Rate, veh/h				344	1490	441	229	1198	0	0	1010	75
Adj No. of Lanes				1	3	1	2	2	0	0	3	1
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	4	4	0	5	5	5
Cap, veh/h				699	2005	612	348	1711	0	0	1642	507
Arrive On Green				0.40	0.40	0.40	0.10	0.49	0.00	0.00	0.33	0.33
Sat Flow, veh/h				1757	5036	1537	3375	3563	0	0	5103	1526
Grp Volume(v), veh/h				344	1490	441	229	1198	0	0	1010	75
Grp Sat Flow(s),veh/h/ln				1757	1679	1537	1688	1736	0	0	1647	1526
Q Serve(g_s), s				12.8	22.1	21.1	5.7	23.3	0.0	0.0	15.0	3.0
Cycle Q Clear(g_c), s				12.8	22.1	21.1	5.7	23.3	0.0	0.0	15.0	3.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				699	2005	612	348	1711	0	0	1642	507
V/C Ratio(X)				0.49	0.74	0.72	0.66	0.70	0.00	0.00	0.61	0.15
Avail Cap(c_a), veh/h				957	2742	837	348	1711	0	0	1642	507
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.78	0.78	0.00	0.00	0.60	0.60
Uniform Delay (d), s/veh				19.6	22.4	22.2	37.6	17.1	0.0	0.0	24.4	20.4
Incr Delay (d2), s/veh				0.5	0.7	1.9	3.5	1.9	0.0	0.0	1.0	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.3	10.3	9.3	2.8	11.6	0.0	0.0	7.0	1.3
LnGrp Delay(d),s/veh				20.2	23.2	24.1	41.1	19.0	0.0	0.0	25.5	20.8
LnGrp LOS				C	C	C	D	B			C	C
Approach Vol, veh/h					2275			1427			1085	
Approach Delay, s/veh					22.9			22.6			25.1	
Approach LOS					C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	26.8	34.0		39.2		60.8						
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0						
Max Green Setting (Gmax), s	9.0	* 29		47.5		43.0						
Max Q Clear Time (g_c+I1), s	7.7	17.0		24.1		25.3						
Green Ext Time (p_c), s	1.0	5.7		10.7		9.3						
Intersection Summary												
HCM 2010 Ctrl Delay				23.3								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	180	960	200	0	0	0	0	1190	150	340	960	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	182.7	182.7				0.0	182.7	182.7	182.7	182.7	0.0
Adj Flow Rate, veh/h	196	1043	157				0	1293	128	370	1043	0
Adj No. of Lanes	0	4	1				0	4	1	2	2	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	260	1502	401				0	2237	535	713	2162	0
Arrive On Green	0.27	0.27	0.27				0.00	0.36	0.36	0.42	1.00	0.00
Sat Flow, veh/h	959	5534	1479				0	6540	1504	3375	3563	0
Grp Volume(v), veh/h	364	875	157				0	1293	128	370	1043	0
Grp Sat Flow(s),veh/h/ln	1779	1571	1479				0	1571	1504	1688	1736	0
Q Serve(g_s), s	16.8	14.9	7.8				0.0	15.0	5.4	7.3	0.0	0.0
Cycle Q Clear(g_c), s	16.8	14.9	7.8				0.0	15.0	5.4	7.3	0.0	0.0
Prop In Lane	0.54		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	483	1279	401				0	2237	535	713	2162	0
V/C Ratio(X)	0.75	0.68	0.39				0.00	0.58	0.24	0.52	0.48	0.00
Avail Cap(c_a), veh/h	683	1809	568				0	2237	535	713	2162	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.79	0.79	0.74	0.74	0.00
Uniform Delay (d), s/veh	30.0	29.3	26.7				0.0	23.5	20.4	22.6	0.0	0.0
Incr Delay (d2), s/veh	3.0	0.7	0.6				0.0	0.9	0.8	0.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	6.6	6.8				0.0	6.6	2.4	3.3	0.2	0.0
LnGrp Delay(d),s/veh	33.0	30.0	27.3				0.0	24.3	21.2	23.1	0.6	0.0
LnGrp LOS	C	C	C					C	C	C	A	
Approach Vol, veh/h		1396						1421			1413	
Approach Delay, s/veh		30.4						24.1			6.5	
Approach LOS		C						C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		71.1		28.9	34.1	37.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		56.0		34.5	19.0	* 32						
Max Q Clear Time (g_c+I1), s		2.0		18.8	9.3	17.0						
Green Ext Time (p_c), s		12.6		0.0	5.8	8.4						
Intersection Summary												
HCM 2010 Ctrl Delay			20.3									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
5: Galindo St & Laguna St/Oak St

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	80	20	80	40	130	40	1190	120	140	1070	40
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	1.00		1.00	1.00		0.95	1.00		0.98
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3	181.0	181.0	181.0	182.7	182.7	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	22	87	12	87	43	0	43	1293	129	152	1163	42
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	5	5	5	4	4	4	4	4	4
Cap, veh/h	84	333	316	123	129	110	79	1697	169	184	1510	54
Arrive On Green	0.23	0.23	0.23	0.07	0.07	0.00	0.05	0.37	0.37	0.21	0.88	0.88
Sat Flow, veh/h	372	1472	1397	1723	1810	1538	1740	4588	458	1740	3415	123
Grp Volume(v), veh/h	109	0	12	87	43	0	43	937	485	152	591	614
Grp Sat Flow(s),veh/h/ln	1844	0	1397	1723	1810	1538	1740	1663	1721	1740	1736	1802
Q Serve(g_s), s	4.1	0.0	0.6	4.1	1.9	0.0	2.0	20.7	20.7	7.0	10.4	10.4
Cycle Q Clear(g_c), s	4.1	0.0	0.6	4.1	1.9	0.0	2.0	20.7	20.7	7.0	10.4	10.4
Prop In Lane	0.20		1.00	1.00		1.00	1.00		0.27	1.00		0.07
Lane Grp Cap(c), veh/h	417	0	316	123	129	110	79	1230	636	184	767	797
V/C Ratio(X)	0.26	0.00	0.04	0.71	0.33	0.00	0.55	0.76	0.76	0.83	0.77	0.77
Avail Cap(c_a), veh/h	605	0	458	236	248	211	187	1230	636	228	767	797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	26.7	0.0	25.3	38.0	37.0	0.0	39.2	23.2	23.2	32.3	3.3	3.3
Incr Delay (d2), s/veh	0.3	0.0	0.0	7.2	1.5	0.0	5.8	4.5	8.4	16.0	6.4	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.2	2.2	1.0	0.0	1.1	10.3	11.3	4.1	5.6	5.8
LnGrp Delay(d),s/veh	27.0	0.0	25.4	45.2	38.5	0.0	44.9	27.7	31.6	48.4	9.7	9.5
LnGrp LOS	C		C	D	D		D	C	C	D	A	A
Approach Vol, veh/h		121			130			1465			1357	
Approach Delay, s/veh		26.8			43.0			29.5			13.9	
Approach LOS		C			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	58.2		23.5	30.0	36.0		10.5				
Change Period (Y+Rc), s	4.0	5.0		4.5	5.0	* 5		4.5				
Max Green Setting (Gmax), s	9.0	34.0		27.5	11.0	* 31		11.5				
Max Q Clear Time (g_c+I1), s	4.0	12.4		6.1	9.0	22.7		6.1				
Green Ext Time (p_c), s	0.0	9.3		0.5	0.1	5.5		0.2				

Intersection Summary

HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

AM Peak Hour
12/10/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Volume (veh/h)	130	1390	1680	60	60	150		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	184.5	184.5	186.3	190.0	184.5	184.5		
Adj Flow Rate, veh/h	141	1511	1826	53	65	86		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	273	4007	2918	85	143	127		
Arrive On Green	0.16	0.80	0.58	0.58	0.08	0.08		
Sat Flow, veh/h	1757	5202	5240	147	1757	1568		
Grp Volume(v), veh/h	141	1511	1220	659	65	86		
Grp Sat Flow(s),veh/h/ln	1757	1679	1695	1829	1757	1568		
Q Serve(g_s), s	5.7	6.8	18.4	18.5	2.7	4.1		
Cycle Q Clear(g_c), s	5.7	6.8	18.4	18.5	2.7	4.1		
Prop In Lane	1.00			0.08	1.00	1.00		
Lane Grp Cap(c), veh/h	273	4007	1951	1052	143	127		
V/C Ratio(X)	0.52	0.38	0.63	0.63	0.46	0.68		
Avail Cap(c_a), veh/h	273	4007	1951	1052	662	591		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	29.9	2.3	10.9	10.9	33.8	34.5		
Incr Delay (d2), s/veh	1.7	0.3	1.5	2.8	2.3	6.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.9	3.2	8.9	10.0	1.4	2.0		
LnGrp Delay(d),s/veh	31.6	2.6	12.4	13.7	36.1	40.5		
LnGrp LOS	C	A	B	B	D	D		
Approach Vol, veh/h		1652	1879		151			
Approach Delay, s/veh		5.1	12.9		38.6			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	39.8	49.4		10.8		89.2		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	12.4	40.0002		29.1		61.4		
Max Q Clear Time (g_c+I1), s	7.7	20.5		6.1		8.8		
Green Ext Time (p_c), s	3.4	15.3		0.4		18.3		

Intersection Summary	
HCM 2010 Ctrl Delay	10.4
HCM 2010 LOS	B

Notes
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

AM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	740	180	590	1780	20	130	30	190	20	60	20
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.92		0.91	0.93		0.90
Parking Bus, 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
Adj Sat Flow, veh/h/ln	179.2	179.2	190.0	188.1	188.1	190.0	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	33	804	106	641	1935	22	141	33	103	22	65	22
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	1	1	1	2	2	2	2	2	2
Cap, veh/h	62	1569	205	748	1951	22	352	501	387	370	347	117
Arrive On Green	0.04	0.36	0.36	0.22	0.54	0.54	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1707	4352	569	3476	3619	41	1207	1863	1438	1156	1290	437
Grp Volume(v), veh/h	33	601	309	641	953	1004	141	33	103	22	0	87
Grp Sat Flow(s),veh/h/ln	1707	1631	1659	1738	1787	1873	1207	1863	1438	1156	0	1727
Q Serve(g_s), s	1.8	13.9	14.1	17.1	50.8	51.3	9.8	1.3	5.4	1.4	0.0	3.7
Cycle Q Clear(g_c), s	1.8	13.9	14.1	17.1	50.8	51.3	13.6	1.3	5.4	2.7	0.0	3.7
Prop In Lane	1.00		0.34	1.00		0.02	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	62	1176	598	748	964	1010	352	501	387	370	0	464
V/C Ratio(X)	0.53	0.51	0.52	0.86	0.99	0.99	0.40	0.07	0.27	0.06	0.00	0.19
Avail Cap(c_a), veh/h	106	1176	598	973	964	1010	366	521	403	383	0	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.6	24.2	24.2	36.4	21.9	22.1	32.4	26.2	27.8	27.2	0.0	27.2
Incr Delay (d2), s/veh	6.8	0.4	0.8	6.1	26.6	26.9	0.7	0.1	0.4	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.3	6.6	8.8	32.0	33.7	3.3	0.7	2.2	0.5	0.0	1.8
LnGrp Delay(d),s/veh	52.4	24.5	25.0	42.6	48.5	48.9	33.1	26.3	28.1	27.3	0.0	27.3
LnGrp LOS	D	C	C	D	D	D	C	C	C	C	C	C
Approach Vol, veh/h		943			2598			277			109	
Approach Delay, s/veh		25.7			47.2			30.5			27.3	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	57.0		30.9	25.7	39.8		30.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	6.0	52.0		27.0	27.0	31.0		27.0				
Max Q Clear Time (g_c+I1), s	3.8	53.3		5.7	19.1	16.1		15.6				
Green Ext Time (p_c), s	0.0	0.0		1.6	1.6	13.7		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			40.3									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	40	1280	40	0	1200
Conflicting Peds, #/hr	0	0	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	4	4	4	4
Mvmt Flow	0	43	1391	43	0	1304

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1935	723	1435
Stage 1	1413	-	-
Stage 2	522	-	-
Critical Hdwy	5.7	7.1	5.38
Critical Hdwy Stg 1	6.6	-	-
Critical Hdwy Stg 2	6	-	-
Follow-up Hdwy	3.8	3.9	3.14
Pot Cap-1 Maneuver	104	320	235
Stage 1	137	-	-
Stage 2	516	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	103	318	234
Mov Cap-2 Maneuver	103	-	-
Stage 1	137	-	-
Stage 2	513	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1	-	-
HCM LOS	C	-	-

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	318	234	-
HCM Lane V/C Ratio	-	-	0.137	-	-
HCM Control Delay (s)	-	-	18.1	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↑↑↑		↔	↑↑↑	
Volume (veh/h)	50	50	30	0	0	0	0	1430	90	220	1620	50
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	190.0	190.0				0.0	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	53	53	24				0	1505	0	232	1705	49
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	2	2	1	1	1
Cap, veh/h	77	77	35				0	3471	0	308	4140	119
Arrive On Green	0.11	0.11	0.11				0.00	0.68	0.00	0.09	0.81	0.81
Sat Flow, veh/h	727	727	329				0	5421	0	3476	5128	147
Grp Volume(v), veh/h	130	0	0				0	1505	0	232	1138	616
Grp Sat Flow(s),veh/h/ln	1784	0	0				0	1695	0	1738	1712	1851
Q Serve(g_s), s	7.7	0.0	0.0				0.0	14.7	0.0	7.2	10.6	10.6
Cycle Q Clear(g_c), s	7.7	0.0	0.0				0.0	14.7	0.0	7.2	10.6	10.6
Prop In Lane	0.41		0.18				0.00		0.00	1.00		0.08
Lane Grp Cap(c), veh/h	190	0	0				0	3471	0	308	2764	1495
V/C Ratio(X)	0.69	0.00	0.00				0.00	0.43	0.00	0.75	0.41	0.41
Avail Cap(c_a), veh/h	348	0	0				0	3471	0	662	2764	1495
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.39	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	0.0	0.0				0.0	7.9	0.0	49.1	3.1	3.1
Incr Delay (d2), s/veh	4.3	0.0	0.0				0.0	0.2	0.0	3.7	0.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0				0.0	6.9	0.0	3.6	5.1	5.7
LnGrp Delay(d),s/veh	51.8	0.0	0.0				0.0	8.0	0.0	52.8	3.5	3.9
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		130						1505			1986	
Approach Delay, s/veh		51.8						8.0			9.4	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		103.8		16.2	13.8	90.0						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		89.0		21.5	21.0	64.0						
Max Q Clear Time (g_c+1), s		12.6		9.7	9.2	16.7						
Green Ext Time (p_c), s		59.1		0.0	0.6	40.1						
Intersection Summary												
HCM 2010 Ctrl Delay			10.4									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	770	150	130	480	240	180	1170	290	270	1230	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	188.1	188.1	188.1	188.1	188.1	190.0	188.1	188.1	188.1
Adj Flow Rate, veh/h	112	786	145	133	490	182	184	1194	284	276	1255	50
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap. veh/h	138	814	150	161	1048	457	214	1262	300	305	1277	565
Arrive On Green	0.08	0.27	0.27	0.09	0.29	0.29	0.12	0.31	0.31	0.34	0.71	0.71
Sat Flow, veh/h	1792	2991	552	1792	3574	1560	1792	4122	980	1792	3574	1582
Grp Volume(v), veh/h	112	470	461	133	490	182	184	992	486	276	1255	50
Grp Sat Flow(s),veh/h/ln	1792	1787	1756	1792	1787	1560	1792	1712	1678	1792	1787	1582
Q Serve(g_s), s	7.2	30.5	30.5	8.6	13.2	7.1	11.9	33.3	33.3	17.3	39.6	0.9
Cycle Q Clear(g_c), s	7.2	30.5	30.5	8.6	13.2	7.1	11.9	33.3	33.3	17.3	39.6	0.9
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	138	486	478	161	1048	457	214	1048	514	305	1277	565
V/C Ratio(X)	0.81	0.97	0.97	0.83	0.47	0.40	0.86	0.95	0.95	0.90	0.98	0.09
Avail Cap(c_a), veh/h	198	486	478	183	1048	457	229	1048	514	320	1277	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.66	0.66	0.66	0.91	0.91	0.91
Uniform Delay (d), s/veh	53.4	42.2	42.2	52.6	34.0	14.1	50.8	39.8	39.8	37.9	16.4	6.3
Incr Delay (d2), s/veh	15.0	32.0	32.3	23.6	0.3	0.6	18.5	13.0	21.6	25.1	20.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	19.3	19.0	5.3	6.6	4.2	7.0	17.6	18.5	10.6	22.1	0.5
LnGrp Delay(d),s/veh	68.4	74.2	74.6	76.2	34.4	14.6	69.4	52.8	61.4	62.9	36.7	6.6
LnGrp LOS	E	E	E	E	C	B	E	D	E	E	D	A
Approach Vol, veh/h		1043			805			1662			1581	
Approach Delay, s/veh		73.7			36.8			57.2			40.3	
Approach LOS		E			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.5	37.0	20.5	47.0	13.1	39.5	26.5	41.0				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	12.0	* 32	15.0	42.0	13.0	32.0	21.0	36.0				
Max Q Clear Time (g_c+1), s	10.6	32.5	13.9	41.6	9.2	15.2	19.3	35.3				
Green Ext Time (p_c), s	0.1	0.0	0.2	0.3	0.1	4.0	0.3	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			52.1									
HCM 2010 LOS			D									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	240	880	480	240	1150	0	0	1420	80
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				188.1	188.1	188.1	188.1	188.1	0.0	190.0	188.1	188.1
Adj Flow Rate, veh/h				255	936	334	255	1223	0	0	1511	72
Adj No. of Lanes				1	3	1	2	2	0	0	3	1
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	1	1	1	1	0	1	1	1
Cap, veh/h				506	1450	439	333	2219	0	0	2488	758
Arrive On Green				0.28	0.28	0.28	0.10	0.62	0.00	0.00	0.97	0.97
Sat Flow, veh/h				1792	5136	1555	3476	3668	0	0	5305	1565
Grp Volume(v), veh/h				255	936	334	255	1223	0	0	1511	72
Grp Sat Flow(s),veh/h/ln				1792	1712	1555	1738	1787	0	0	1712	1565
Q Serve(g_s), s				11.7	15.7	19.3	7.0	19.4	0.0	0.0	2.2	0.2
Cycle Q Clear(g_c), s				11.7	15.7	19.3	7.0	19.4	0.0	0.0	2.2	0.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				506	1450	439	333	2219	0	0	2488	758
VC Ratio(X)				0.50	0.65	0.76	0.77	0.55	0.00	0.00	0.61	0.09
Avail Cap(c_a), veh/h				903	2588	784	495	2219	0	0	2488	758
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.55	0.55	0.00	0.00	0.21	0.21
Uniform Delay (d), s/veh				29.5	30.9	32.2	43.3	10.7	0.0	0.0	0.8	0.8
Incr Delay (d2), s/veh				0.8	0.5	2.7	2.3	0.5	0.0	0.0	0.2	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.9	7.4	8.6	3.5	9.7	0.0	0.0	0.6	0.1
LnGrp Delay(d),s/veh				30.3	31.4	35.0	45.6	11.3	0.0	0.0	1.1	0.8
LnGrp LOS				C	C	C	D	B			A	A
Approach Vol, veh/h					1525			1478			1583	
Approach Delay, s/veh					32.0			17.2			1.0	
Approach LOS					C			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.4	74.4		32.2		87.8						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	14.0	43.0		49.5		61.0						
Max Q Clear Time (g_c+I1), s	9.0	4.2		21.3		21.4						
Green Ext Time (p_c), s	0.4	30.7		6.5		31.2						
Intersection Summary												
HCM 2010 Ctrl Delay				16.5								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↑					↑↑↑↑	↑	↑↑	↑↑	
Volume (veh/h)	180	1480	330	0	0	0	0	1220	230	700	970	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3				0.0	188.1	188.1	188.1	188.1	0.0
Adj Flow Rate, veh/h	191	1574	305				0	1298	224	745	1032	0
Adj No. of Lanes	0	4	1				0	4	1	2	2	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	1	1	1	1	0
Cap, veh/h	209	1855	473				0	1743	410	936	2111	0
Arrive On Green	0.31	0.31	0.31				0.00	0.27	0.27	0.27	0.59	0.00
Sat Flow, veh/h	671	5964	1519				0	6735	1521	3476	3668	0
Grp Volume(v), veh/h	521	1244	305				0	1298	224	745	1032	0
Grp Sat Flow(s),veh/h/ln	1829	1602	1519				0	1618	1521	1738	1787	0
Q Serve(g_s), s	26.5	23.2	16.7				0.0	17.7	12.2	19.2	16.0	0.0
Cycle Q Clear(g_c), s	26.5	23.2	16.7				0.0	17.7	12.2	19.2	16.0	0.0
Prop In Lane	0.37		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	569	1495	473				0	1743	410	936	2111	0
V/C Ratio(X)	0.91	0.83	0.65				0.00	0.74	0.55	0.80	0.49	0.00
Avail Cap(c_a), veh/h	635	1668	527				0	1743	410	936	2111	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.85	0.85	0.67	0.67	0.00
Uniform Delay (d), s/veh	32.0	30.9	28.7				0.0	32.2	30.2	32.8	11.4	0.0
Incr Delay (d2), s/veh	16.9	3.4	2.3				0.0	2.5	4.4	3.3	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.0	10.7	14.1				0.0	8.2	5.6	9.6	8.0	0.0
LnGrp Delay(d),s/veh	48.9	34.4	31.0				0.0	34.7	34.6	36.1	11.9	0.0
LnGrp LOS	D	C	C					C	C	D	B	
Approach Vol, veh/h		2070						1522			1777	
Approach Delay, s/veh		37.5						34.7			22.0	
Approach LOS		D						C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		65.5		34.5	34.5	31.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		57.0		33.5	26.0	* 26						
Max Q Clear Time (g_c+I1), s		18.0		28.5	21.2	19.7						
Green Ext Time (p_c), s		14.5		0.0	3.6	4.5						

Intersection Summary

HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
5: Galindo St & Laguna St/Oak St

PM Peak Hour
12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	50	20	130	50	260	50	1160	90	70	1110	60
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		0.96	1.00		0.96
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	184.5	184.5	188.1	188.1	188.1	186.3	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	54	54	6	141	54	0	54	1261	97	76	1207	64
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	1	1	2	2	2	1	1	1
Cap, veh/h	140	140	224	177	185	158	83	2437	187	98	1776	94
Arrive On Green	0.16	0.16	0.16	0.10	0.10	0.00	0.05	0.51	0.51	0.05	0.52	0.52
Sat Flow, veh/h	900	900	1438	1792	1881	1599	1774	4799	369	1792	3444	182
Grp Volume(v), veh/h	108	0	6	141	54	0	54	891	467	76	626	645
Grp Sat Flow(s),veh/h/ln	1800	0	1438	1792	1881	1599	1774	1695	1778	1792	1787	1840
Q Serve(g_s), s	5.3	0.0	0.3	7.6	2.6	0.0	2.9	17.3	17.3	4.1	25.7	25.8
Cycle Q Clear(g_c), s	5.3	0.0	0.3	7.6	2.6	0.0	2.9	17.3	17.3	4.1	25.7	25.8
Prop In Lane	0.50		1.00	1.00		1.00	1.00		0.21	1.00		0.10
Lane Grp Cap(c), veh/h	280	0	224	177	185	158	83	1722	903	98	922	949
V/C Ratio(X)	0.39	0.00	0.03	0.80	0.29	0.00	0.65	0.52	0.52	0.77	0.68	0.68
Avail Cap(c_a), veh/h	503	0	402	227	239	203	216	1722	903	218	922	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	37.3	0.0	35.2	43.4	41.2	0.0	46.1	16.2	16.2	45.9	17.8	17.8
Incr Delay (d2), s/veh	0.9	0.0	0.0	14.1	0.9	0.0	8.1	1.1	2.1	10.1	3.3	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.1	4.5	1.4	0.0	1.6	8.3	9.0	2.3	13.4	13.8
LnGrp Delay(d),s/veh	38.2	0.0	35.3	57.5	42.0	0.0	54.3	17.3	18.3	56.0	21.1	21.1
LnGrp LOS	D		D	E	D		D	B	B	E	C	C
Approach Vol, veh/h		114			195			1412			1347	
Approach Delay, s/veh		38.0			53.2			19.0			23.0	
Approach LOS		D			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	77.3		19.8	9.4	76.5		14.2				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	12.0	50.0		27.5	12.0	50.0		12.5				
Max Q Clear Time (g_c+I1), s	4.9	27.8		7.3	6.1	19.3		9.6				
Green Ext Time (p_c), s	0.0	18.1		0.5	0.1	23.6		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			23.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

PM Peak Hour
12/10/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Volume (veh/h)	220	1990	1250	90	170	260		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	188.1	188.1	188.1	190.0	188.1	188.1		
Adj Flow Rate, veh/h	239	2163	1359	85	185	137		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	437	3846	2191	137	242	216		
Arrive On Green	0.24	0.75	0.44	0.44	0.14	0.14		
Sat Flow, veh/h	1792	5305	5104	309	1792	1599		
Grp Volume(v), veh/h	239	2163	943	501	185	137		
Grp Sat Flow(s),veh/h/ln	1792	1712	1712	1820	1792	1599		
Q Serve(g_s), s	9.5	15.0	17.3	17.3	8.2	6.6		
Cycle Q Clear(g_c), s	9.5	15.0	17.3	17.3	8.2	6.6		
Prop In Lane	1.00			0.17	1.00	1.00		
Lane Grp Cap(c), veh/h	437	3846	1520	808	242	216		
V/C Ratio(X)	0.55	0.56	0.62	0.62	0.76	0.63		
Avail Cap(c_a), veh/h	437	3846	1520	808	636	568		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	27.0	4.5	17.5	17.5	34.2	33.5		
Incr Delay (d2), s/veh	1.4	0.6	1.9	3.6	5.0	3.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.9	7.0	8.5	9.4	4.3	3.1		
LnGrp Delay(d),s/veh	28.5	5.1	19.4	21.1	39.2	36.6		
LnGrp LOS	C	A	B	C	D	D		
Approach Vol, veh/h		2402	1444		322			
Approach Delay, s/veh		7.4	20.0		38.1			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	43.0	41.4		15.6		84.4		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	20.86	40.0002		29.1		61.4		
Max Q Clear Time (g_c+I1), s	11.5	19.3		10.2		17.0		
Green Ext Time (p_c), s	7.6	9.4		0.9		29.7		
Intersection Summary								
HCM 2010 Ctrl Delay			14.1					
HCM 2010 LOS			B					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

PM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1750	170	250	890	50	230	60	510	80	60	60
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	0.96		0.93	0.97		0.94
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	184.5	184.5	190.0	190.0	190.0	190.0	190.0	190.0	190.0
Adj Flow Rate, veh/h	116	1842	103	263	937	50	242	63	358	84	63	47
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	0	0	0
Cap, veh/h	147	2410	134	221	1580	84	377	548	434	329	284	212
Arrive On Green	0.08	0.48	0.48	0.06	0.47	0.47	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1792	4970	277	3408	3379	180	1246	1900	1504	952	985	734
Grp Volume(v), veh/h	116	1267	678	263	486	501	242	63	358	84	0	110
Grp Sat Flow(s),veh/h/ln	1792	1712	1824	1704	1752	1807	1246	1900	1504	952	0	1719
Q Serve(g_s), s	5.9	28.1	28.2	6.0	18.9	18.9	17.0	2.3	20.6	6.6	0.0	4.5
Cycle Q Clear(g_c), s	5.9	28.1	28.2	6.0	18.9	18.9	21.5	2.3	20.6	8.9	0.0	4.5
Prop In Lane	1.00		0.15	1.00		0.10	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	147	1660	884	221	820	845	377	548	434	329	0	496
V/C Ratio(X)	0.79	0.76	0.77	1.19	0.59	0.59	0.64	0.11	0.82	0.26	0.00	0.22
Avail Cap(c_a), veh/h	251	1773	945	221	820	845	434	636	503	373	0	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.8	19.5	19.6	43.3	18.2	18.2	33.2	24.3	30.8	27.5	0.0	25.1
Incr Delay (d2), s/veh	9.1	1.9	3.6	122.1	3.1	3.1	2.6	0.1	9.5	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	13.6	15.0	6.5	9.8	10.0	6.1	1.2	9.7	1.8	0.0	2.2
LnGrp Delay(d),s/veh	50.9	21.4	23.1	165.5	21.3	21.2	35.8	24.4	40.3	27.9	0.0	25.3
LnGrp LOS	D	C	C	F	C	C	D	C	D	C		C
Approach Vol, veh/h		2061			1250			663			194	
Approach Delay, s/veh		23.6			51.6			37.2			26.4	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	48.3		31.7	11.0	49.9		31.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	13.0	41.0		31.0	6.0	48.0		31.0				
Max Q Clear Time (g_c+I1), s	7.9	20.9		10.9	8.0	30.2		23.5				
Green Ext Time (p_c), s	0.1	17.7		3.7	0.0	14.7		2.4				
Intersection Summary												
HCM 2010 Ctrl Delay			34.3									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	50	1240	30	0	1310
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	54	1348	33	0	1424

Major/Minor	Minor1	Minor2	Major1	Major2
Conflicting Flow All	1934	699	0	0
Stage 1	1364	-	-	-
Stage 2	570	-	-	-
Critical Hdwy	5.7	7.1	-	5.32
Critical Hdwy Stg 1	6.6	-	-	-
Critical Hdwy Stg 2	6	-	-	-
Follow-up Hdwy	3.8	3.9	-	3.11
Pot Cap-1 Maneuver	104	332	-	258
Stage 1	147	-	-	-
Stage 2	488	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	103	330	-	256
Mov Cap-2 Maneuver	103	-	-	-
Stage 1	147	-	-	-
Stage 2	484	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	330	256	-
HCM Lane V/C Ratio	-	-	0.165	-	-
HCM Control Delay (s)	-	-	18	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↑↑↑		↔	↑↑↑	
Volume (veh/h)	20	30	10	0	0	0	0	1760	100	90	960	10
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	184.5	190.0				0.0	184.5	190.0	181.0	181.0	190.0
Adj Flow Rate, veh/h	22	33	6				0	1913	0	98	1043	11
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	3	0				0	3	3	5	5	5
Cap, veh/h	44	66	12				0	3598	0	208	4144	44
Arrive On Green	0.07	0.07	0.07				0.00	0.71	0.00	0.06	0.82	0.82
Sat Flow, veh/h	640	959	174				0	5368	0	3343	5039	53
Grp Volume(v), veh/h	61	0	0				0	1913	0	98	682	372
Grp Sat Flow(s),veh/h/ln	1774	0	0				0	1679	0	1672	1647	1799
Q Serve(g_s), s	2.9	0.0	0.0				0.0	15.3	0.0	2.5	4.1	4.1
Cycle Q Clear(g_c), s	2.9	0.0	0.0				0.0	15.3	0.0	2.5	4.1	4.1
Prop In Lane	0.36		0.10				0.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	123	0	0				0	3598	0	208	2708	1480
V/C Ratio(X)	0.50	0.00	0.00				0.00	0.53	0.00	0.47	0.25	0.25
Avail Cap(c_a), veh/h	375	0	0				0	3598	0	726	2708	1480
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.29	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	0.0				0.0	5.8	0.0	39.7	1.7	1.7
Incr Delay (d2), s/veh	3.1	0.0	0.0				0.0	0.2	0.0	1.7	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0				0.0	7.0	0.0	1.2	1.9	2.1
LnGrp Delay(d),s/veh	42.4	0.0	0.0				0.0	5.9	0.0	41.3	2.0	2.2
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		61						1913			1152	
Approach Delay, s/veh		42.4						5.9			5.4	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		89.4		10.6	9.4	80.0						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		72.0		18.5	19.0	49.0						
Max Q Clear Time (g_c+I1), s		6.1		4.9	4.5	17.3						
Green Ext Time (p_c), s		48.6		0.0	0.2	27.0						
Intersection Summary												
HCM 2010 Ctrl Delay			6.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	310	70	220	850	310	130	1440	140	110	780	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	188.1	188.1	188.1	184.5	184.5	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	76	337	71	239	924	257	141	1565	152	120	848	33
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	98	554	115	327	1136	497	233	1572	152	152	1440	56
Arrive On Green	0.06	0.19	0.19	0.18	0.32	0.32	0.13	0.34	0.34	0.12	0.39	0.39
Sat Flow, veh/h	1774	2909	605	1792	3574	1563	1757	4660	452	1740	4925	191
Grp Volume(v), veh/h	76	203	205	239	924	257	141	1127	590	120	572	309
Grp Sat Flow(s),veh/h/ln	1774	1770	1745	1792	1787	1563	1757	1679	1755	1740	1663	1792
Q Serve(g_s), s	3.8	9.3	9.6	11.2	21.2	11.9	6.7	29.8	29.9	6.0	12.1	12.2
Cycle Q Clear(g_c), s	3.8	9.3	9.6	11.2	21.2	11.9	6.7	29.8	29.9	6.0	12.1	12.2
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.26	1.00		0.11
Lane Grp Cap(c), veh/h	98	337	332	327	1136	497	233	1132	592	152	972	524
V/C Ratio(X)	0.78	0.60	0.62	0.73	0.81	0.52	0.61	1.00	1.00	0.79	0.59	0.59
Avail Cap(c_a), veh/h	199	557	549	327	1246	545	296	1132	592	215	972	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.51	0.51	0.51	0.98	0.98	0.98
Uniform Delay (d), s/veh	41.5	32.9	33.0	34.3	27.9	24.8	36.4	29.4	29.4	38.5	22.9	23.0
Incr Delay (d2), s/veh	12.2	1.7	1.9	8.1	3.9	0.8	1.3	18.1	25.8	11.8	2.6	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	4.7	4.8	6.2	11.0	5.2	3.3	16.6	18.7	3.4	5.8	6.6
LnGrp Delay(d),s/veh	53.7	34.7	34.9	42.4	31.8	25.6	37.7	47.5	55.2	50.3	25.5	27.7
LnGrp LOS	D	C	C	D	C	C	D	D	E	D	C	C
Approach Vol, veh/h		484			1420			1858			1001	
Approach Delay, s/veh		37.8			32.5			49.2			29.1	
Approach LOS		D			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.2	21.9	26.8	31.0	8.9	33.3	22.8	35.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	13.0	28.0	15.0	26.0	10.0	31.0	11.0	30.0				
Max Q Clear Time (g_c+I1), s	13.2	11.6	8.7	14.2	5.8	23.2	8.0	31.9				
Green Ext Time (p_c), s	0.0	2.2	0.4	4.5	0.1	4.3	0.2	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			38.8									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

AM Peak Hour
 12/11/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑	↑	↑	↑↑			↑↑↑	
Volume (veh/h)	0	0	0	330	1430	590	220	1150	0	0	970	100
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	184.5	184.5	182.7	182.7	0.0	0.0	181.0	190.0
Adj Flow Rate, veh/h				344	1490	441	229	1198	0	0	1010	75
Adj No. of Lanes				0	3	1	1	2	0	0	3	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				3	3	3	4	4	0	0	5	5
Cap, veh/h				357	1674	605	266	1737	0	0	1421	105
Arrive On Green				0.39	0.39	0.39	0.15	0.50	0.00	0.00	0.61	0.61
Sat Flow, veh/h				906	4250	1537	1740	3563	0	0	4855	348
Grp Volume(v), veh/h				683	1151	441	229	1198	0	0	708	377
Grp Sat Flow(s),veh/h/ln				1799	1679	1537	1740	1736	0	0	1647	1747
Q Serve(g_s), s				33.4	28.4	21.9	11.5	23.7	0.0	0.0	13.4	13.4
Cycle Q Clear(g_c), s				33.4	28.4	21.9	11.5	23.7	0.0	0.0	13.4	13.4
Prop In Lane				0.50		1.00	1.00		0.00	0.00		0.20
Lane Grp Cap(c), veh/h				709	1322	605	266	1737	0	0	998	529
V/C Ratio(X)				0.96	0.87	0.73	0.86	0.69	0.00	0.00	0.71	0.71
Avail Cap(c_a), veh/h				910	1699	778	348	1737	0	0	998	529
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.67	0.67	0.00	0.00	0.76	0.76
Uniform Delay (d), s/veh				26.6	25.1	23.2	37.1	17.1	0.0	0.0	15.0	15.0
Incr Delay (d2), s/veh				19.0	4.2	2.5	11.0	1.5	0.0	0.0	3.3	6.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				20.2	13.9	9.7	6.4	11.7	0.0	0.0	6.4	7.2
LnGrp Delay(d),s/veh				45.6	29.3	25.7	48.2	18.7	0.0	0.0	18.3	21.1
LnGrp LOS				D	C	C	D	B			B	C
Approach Vol, veh/h					2275			1427			1085	
Approach Delay, s/veh					33.5			23.4			19.3	
Approach LOS					C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	17.8	42.3		39.9		60.1						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	18.0	23.0		45.5		45.0						
Max Q Clear Time (g_c+I1), s	13.5	15.4		35.4		25.7						
Green Ext Time (p_c), s	0.3	6.6		0.1		15.0						
Intersection Summary												
HCM 2010 Ctrl Delay					27.3							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
 4: Galindo St & Clayton Rd

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑	↑					↑↑↑	↑	↑↑	↑↑↑	
Volume (veh/h)	180	960	200	0	0	0	0	1190	150	340	960	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	182.7	182.7				0.0	182.7	182.7	182.7	182.7	0.0
Adj Flow Rate, veh/h	196	1043	157				0	1293	128	370	1043	0
Adj No. of Lanes	0	4	1				0	3	1	2	3	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	258	1487	397				0	1945	587	622	3134	0
Arrive On Green	0.27	0.27	0.27				0.00	0.39	0.39	0.37	1.00	0.00
Sat Flow, veh/h	959	5534	1478				0	5152	1505	3375	5152	0
Grp Volume(v), veh/h	364	875	157				0	1293	128	370	1043	0
Grp Sat Flow(s),veh/h/ln	1779	1571	1478				0	1663	1505	1688	1663	0
Q Serve(g_s), s	17.4	15.4	8.0				0.0	19.7	5.2	8.2	0.0	0.0
Cycle Q Clear(g_c), s	17.4	15.4	8.0				0.0	19.7	5.2	8.2	0.0	0.0
Prop In Lane	0.54		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	478	1266	397				0	1945	587	622	3134	0
V/C Ratio(X)	0.76	0.69	0.40				0.00	0.66	0.22	0.60	0.33	0.00
Avail Cap(c_a), veh/h	626	1660	521				0	1945	587	622	3134	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.80	0.80	0.26	0.26	0.00
Uniform Delay (d), s/veh	31.0	30.3	27.6				0.0	23.2	18.8	26.4	0.0	0.0
Incr Delay (d2), s/veh	4.0	0.8	0.6				0.0	1.5	0.7	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	6.7	7.0				0.0	9.2	2.3	3.8	0.0	0.0
LnGrp Delay(d),s/veh	35.0	31.1	28.3				0.0	24.6	19.4	26.8	0.1	0.0
LnGrp LOS	C	C	C					C	B	C	A	
Approach Vol, veh/h		1396						1421			1413	
Approach Delay, s/veh		31.8						24.2			7.1	
Approach LOS		C						C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		70.7		29.3	29.7	41.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		58.0		32.5	17.0	* 36						
Max Q Clear Time (g_c+I1), s		2.0		19.4	10.2	21.7						
Green Ext Time (p_c), s		12.3		0.0	4.4	8.2						
Intersection Summary												
HCM 2010 Ctrl Delay			21.0									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 5: Galindo St & Laguna St/Oak St

AM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	80	20	80	40	130	40	1190	120	140	1070	40
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	1.00		1.00	1.00		0.96	1.00		0.98
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3	181.0	181.0	181.0	182.7	182.7	190.0	182.7	182.7	190.0
Adj Flow Rate, veh/h	22	87	12	87	43	0	43	1293	129	152	1163	42
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	5	5	5	4	4	4	4	4	4
Cap, veh/h	84	331	314	121	127	108	78	1780	178	184	1531	55
Arrive On Green	0.22	0.22	0.22	0.07	0.07	0.00	0.04	0.39	0.39	0.21	0.90	0.90
Sat Flow, veh/h	372	1472	1396	1723	1810	1538	1740	4588	458	1740	3415	123
Grp Volume(v), veh/h	109	0	12	87	43	0	43	937	485	152	591	614
Grp Sat Flow(s),veh/h/ln	1844	0	1396	1723	1810	1538	1740	1663	1721	1740	1736	1802
Q Serve(g_s), s	4.1	0.0	0.6	4.2	1.9	0.0	2.1	20.4	20.4	7.1	9.4	9.4
Cycle Q Clear(g_c), s	4.1	0.0	0.6	4.2	1.9	0.0	2.1	20.4	20.4	7.1	9.4	9.4
Prop In Lane	0.20		1.00	1.00		1.00	1.00		0.27	1.00		0.07
Lane Grp Cap(c), veh/h	414	0	314	121	127	108	78	1290	668	184	778	808
V/C Ratio(X)	0.26	0.00	0.04	0.72	0.34	0.00	0.55	0.73	0.73	0.83	0.76	0.76
Avail Cap(c_a), veh/h	596	0	451	172	181	154	164	1290	668	266	778	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	27.2	0.0	25.8	38.7	37.7	0.0	39.8	22.2	22.2	32.8	2.9	2.9
Incr Delay (d2), s/veh	0.3	0.0	0.0	7.9	1.5	0.0	5.9	3.6	6.8	12.5	6.5	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.2	2.3	1.0	0.0	1.1	10.0	11.0	4.1	5.1	5.3
LnGrp Delay(d),s/veh	27.5	0.0	25.8	46.6	39.2	0.0	45.7	25.8	29.0	45.3	9.4	9.2
LnGrp LOS	C		C	D	D		D	C	C	D	A	A
Approach Vol, veh/h		121			130			1465			1357	
Approach Delay, s/veh		27.4			44.2			27.4			13.3	
Approach LOS		C			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	58.1		23.6	13.0	52.9		10.5				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	8.0	38.0		27.5	13.0	33.0		8.5				
Max Q Clear Time (g_c+I1), s	4.1	11.4		6.1	9.1	22.4		6.2				
Green Ext Time (p_c), s	0.0	21.0		0.5	0.1	9.4		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			21.9									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

AM Peak Hour
12/10/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Volume (veh/h)	130	1390	1680	60	60	150		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	184.5	184.5	186.3	190.0	184.5	184.5		
Adj Flow Rate, veh/h	141	1511	1826	53	65	86		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	273	4007	2918	85	143	127		
Arrive On Green	0.16	0.80	0.58	0.58	0.08	0.08		
Sat Flow, veh/h	1757	5202	5240	147	1757	1568		
Grp Volume(v), veh/h	141	1511	1220	659	65	86		
Grp Sat Flow(s),veh/h/ln	1757	1679	1695	1829	1757	1568		
Q Serve(g_s), s	5.7	6.8	18.4	18.5	2.7	4.1		
Cycle Q Clear(g_c), s	5.7	6.8	18.4	18.5	2.7	4.1		
Prop In Lane	1.00			0.08	1.00	1.00		
Lane Grp Cap(c), veh/h	273	4007	1951	1052	143	127		
V/C Ratio(X)	0.52	0.38	0.63	0.63	0.46	0.68		
Avail Cap(c_a), veh/h	273	4007	1951	1052	662	591		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	29.9	2.3	10.9	10.9	33.8	34.5		
Incr Delay (d2), s/veh	1.7	0.3	1.5	2.8	2.3	6.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.9	3.2	8.9	10.0	1.4	2.0		
LnGrp Delay(d),s/veh	31.6	2.6	12.4	13.7	36.1	40.5		
LnGrp LOS	C	A	B	B	D	D		
Approach Vol, veh/h		1652	1879		151			
Approach Delay, s/veh		5.1	12.9		38.6			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	39.8	49.4		10.8		89.2		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	12.4	4.00002		29.1		61.4		
Max Q Clear Time (g_c+I1), s	7.7	20.5		6.1		8.8		
Green Ext Time (p_c), s	3.4	15.3		0.4		18.3		
Intersection Summary								
HCM 2010 Ctrl Delay			10.4					
HCM 2010 LOS			B					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

AM Peak Hour
12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 							
Volume (veh/h)	30	740	180	590	1780	20	130	30	190	20	60	20
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	0.92		0.91	0.93		0.90
Parking Bus, 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
Adj Sat Flow, veh/h/ln	179.2	179.2	190.0	188.1	188.1	190.0	186.3	186.3	186.3	186.3	186.3	190.0
Adj Flow Rate, veh/h	33	804	106	641	1935	22	141	33	103	22	65	22
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	1	1	1	2	2	2	2	2	2
Cap, veh/h	62	1569	205	748	1951	22	352	501	387	370	347	117
Arrive On Green	0.04	0.36	0.36	0.22	0.54	0.54	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1707	4352	569	3476	3619	41	1207	1863	1438	1156	1290	437
Grp Volume(v), veh/h	33	601	309	641	953	1004	141	33	103	22	0	87
Grp Sat Flow(s),veh/h/ln	1707	1631	1659	1738	1787	1873	1207	1863	1438	1156	0	1727
Q Serve(g_s), s	1.8	13.9	14.1	17.1	50.8	51.3	9.8	1.3	5.4	1.4	0.0	3.7
Cycle Q Clear(g_c), s	1.8	13.9	14.1	17.1	50.8	51.3	13.6	1.3	5.4	2.7	0.0	3.7
Prop In Lane	1.00		0.34	1.00		0.02	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	62	1176	598	748	964	1010	352	501	387	370	0	464
V/C Ratio(X)	0.53	0.51	0.52	0.86	0.99	0.99	0.40	0.07	0.27	0.06	0.00	0.19
Avail Cap(c_a), veh/h	106	1176	598	973	964	1010	366	521	403	383	0	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.6	24.2	24.2	36.4	21.9	22.1	32.4	26.2	27.8	27.2	0.0	27.2
Incr Delay (d2), s/veh	6.8	0.4	0.8	6.1	26.6	26.9	0.7	0.1	0.4	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.3	6.6	8.8	32.0	33.7	3.3	0.7	2.2	0.5	0.0	1.8
LnGrp Delay(d),s/veh	52.4	24.5	25.0	42.6	48.5	48.9	33.1	26.3	28.1	27.3	0.0	27.3
LnGrp LOS	D	C	C	D	D	D	C	C	C	C		C
Approach Vol, veh/h		943			2598			277			109	
Approach Delay, s/veh		25.7			47.2			30.5			27.3	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	57.0		30.9	25.7	39.8		30.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	6.0	52.0		27.0	27.0	31.0		27.0				
Max Q Clear Time (g_c+I1), s	3.8	53.3		5.7	19.1	16.1		15.6				
Green Ext Time (p_c), s	0.0	0.0		1.6	1.6	13.7		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			40.3									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	40	1280	40	0	1200
Conflicting Peds, #/hr	0	0	0	6	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	4	4	4	4
Mvmt Flow	0	43	1391	43	0	1304

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1935	723	0
Stage 1	1413	-	-
Stage 2	522	-	-
Critical Hdwy	5.7	7.1	5.38
Critical Hdwy Stg 1	6.6	-	-
Critical Hdwy Stg 2	6	-	-
Follow-up Hdwy	3.8	3.9	3.14
Pot Cap-1 Maneuver	104	320	235
Stage 1	137	-	-
Stage 2	516	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	103	318	234
Mov Cap-2 Maneuver	103	-	-
Stage 1	137	-	-
Stage 2	513	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.1		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	318	234	-
HCM Lane V/C Ratio	-	-	0.137	-	-
HCM Control Delay (s)	-	-	18.1	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
 1: Concord Ave & Adobe St/Pacheco St

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↑↑↑		↖↗	↑↑↑	
Volume (veh/h)	50	50	30	0	0	0	0	1430	90	220	1620	50
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	190.0	190.0				0.0	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	53	53	24				0	1505	0	232	1705	49
Adj No. of Lanes	0	1	0				0	3	0	2	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0				0	2	2	1	1	1
Cap, veh/h	78	78	35				0	3461	0	309	4134	119
Arrive On Green	0.11	0.11	0.11				0.00	0.68	0.00	0.09	0.81	0.81
Sat Flow, veh/h	727	727	329				0	5421	0	3476	5128	147
Grp Volume(v), veh/h	130	0	0				0	1505	0	232	1138	616
Grp Sat Flow(s),veh/h/ln	1784	0	0				0	1695	0	1738	1712	1851
Q Serve(g_s), s	7.7	0.0	0.0				0.0	14.7	0.0	7.1	10.5	10.5
Cycle Q Clear(g_c), s	7.7	0.0	0.0				0.0	14.7	0.0	7.1	10.5	10.5
Prop In Lane	0.41		0.18				0.00		0.00	1.00		0.08
Lane Grp Cap(c), veh/h	190	0	0				0	3461	0	309	2760	1493
V/C Ratio(X)	0.68	0.00	0.00				0.00	0.43	0.00	0.75	0.41	0.41
Avail Cap(c_a), veh/h	368	0	0				0	3461	0	701	2760	1493
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.37	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	0.0	0.0				0.0	7.9	0.0	48.5	3.1	3.1
Incr Delay (d2), s/veh	4.3	0.0	0.0				0.0	0.1	0.0	3.6	0.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0				0.0	6.9	0.0	3.6	5.1	5.7
LnGrp Delay(d),s/veh	51.2	0.0	0.0				0.0	8.1	0.0	52.2	3.5	3.9
LnGrp LOS	D							A		D	A	A
Approach Vol, veh/h		130						1505			1986	
Approach Delay, s/veh		51.2						8.1			9.3	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		103.9		16.1	13.7	90.1						
Change Period (Y+Rc), s		5.0		4.5	4.0	5.0						
Max Green Setting (Gmax), s		88.0		22.5	22.0	62.0						
Max Q Clear Time (g_c+1), s		12.5		9.7	9.1	16.7						
Green Ext Time (p_c), s		58.5		0.0	0.6	38.7						
Intersection Summary												
HCM 2010 Ctrl Delay			10.3									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 2: Galindo St & Willow Pass Rd

PM Peak Hour
 12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	770	150	130	480	240	180	1170	290	270	1230	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.99
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	188.1	188.1	188.1	188.1	188.1	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	112	786	145	133	490	182	184	1194	284	276	1255	50
Adj No. of Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	256	837	154	162	814	353	223	1242	295	302	1750	70
Arrive On Green	0.14	0.28	0.28	0.09	0.23	0.23	0.12	0.30	0.30	0.34	0.69	0.69
Sat Flow, veh/h	1792	2992	552	1792	3574	1548	1792	4122	980	1792	5065	202
Grp Volume(v), veh/h	112	469	462	133	490	182	184	992	486	276	848	457
Grp Sat Flow(s),veh/h/ln	1792	1787	1757	1792	1787	1548	1792	1712	1678	1792	1712	1843
Q Serve(g_s), s	6.5	29.0	29.0	8.2	13.8	11.6	11.3	32.2	32.2	16.6	17.1	17.1
Cycle Q Clear(g_c), s	6.5	29.0	29.0	8.2	13.8	11.6	11.3	32.2	32.2	16.6	17.1	17.1
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.58	1.00		0.11
Lane Grp Cap(c), veh/h	256	500	492	162	814	353	223	1032	506	302	1183	637
V/C Ratio(X)	0.44	0.94	0.94	0.82	0.60	0.52	0.83	0.96	0.96	0.91	0.72	0.72
Avail Cap(c_a), veh/h	256	507	498	238	1077	467	254	1032	506	333	1183	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	0.91	0.91	0.91
Uniform Delay (d), s/veh	44.2	39.7	39.7	50.4	39.0	38.1	48.2	38.8	38.8	36.6	14.0	14.0
Incr Delay (d2), s/veh	1.2	25.4	25.7	13.3	0.7	1.2	12.6	15.4	24.6	25.2	3.4	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	17.7	17.5	4.7	6.9	5.1	6.4	17.4	18.3	10.3	8.5	9.6
LnGrp Delay(d),s/veh	45.4	65.1	65.4	63.7	39.7	39.3	60.8	54.2	63.4	61.8	17.4	20.2
LnGrp LOS	D	E	E	E	D	D	E	D	E	E	B	C
Approach Vol, veh/h		1043			805			1662			1581	
Approach Delay, s/veh		63.1			43.6			57.6			26.0	
Approach LOS		E			D			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	36.6	25.2	44.0	20.1	30.7	30.2	39.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	15.0	32.0	16.0	39.0	13.0	34.0	21.0	34.0				
Max Q Clear Time (g_c+I1), s	10.2	31.0	13.3	19.1	8.5	15.8	18.6	34.2				
Green Ext Time (p_c), s	0.2	0.6	0.4	9.1	0.3	3.7	0.4	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			46.7									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 3: Galindo St & Concord Blvd

PM Peak Hour
 12/11/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑	↑	↑	↑↑			↑↑↑	
Volume (veh/h)	0	0	0	240	880	480	240	1150	0	0	1420	80
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				190.0	188.1	188.1	188.1	188.1	0.0	0.0	188.1	190.0
Adj Flow Rate, veh/h				255	936	334	255	1223	0	0	1511	72
Adj No. of Lanes				0	3	1	1	2	0	0	3	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				1	1	1	1	1	0	0	1	1
Cap, veh/h				271	1075	398	294	2328	0	0	2250	107
Arrive On Green				0.26	0.26	0.26	0.16	0.65	0.00	0.00	0.90	0.90
Sat Flow, veh/h				1058	4194	1553	1792	3668	0	0	5187	239
Grp Volume(v), veh/h				440	751	334	255	1223	0	0	1031	552
Grp Sat Flow(s),veh/h/ln				1828	1712	1553	1792	1787	0	0	1712	1833
Q Serve(g_s), s				24.3	21.5	21.0	14.3	18.7	0.0	0.0	8.0	8.0
Cycle Q Clear(g_c), s				24.3	21.5	21.0	14.3	18.7	0.0	0.0	8.0	8.0
Prop In Lane				0.58		1.00	1.00		0.00	0.00		0.13
Lane Grp Cap(c), veh/h				469	878	398	294	2328	0	0	1535	822
V/C Ratio(X)				0.94	0.86	0.84	0.87	0.53	0.00	0.00	0.67	0.67
Avail Cap(c_a), veh/h				773	1448	657	522	2328	0	0	1535	822
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	1.00	1.00	0.42	0.42	0.00	0.00	0.60	0.60
Uniform Delay (d), s/veh				37.5	36.4	36.2	41.9	9.5	0.0	0.0	3.3	3.3
Incr Delay (d2), s/veh				13.1	2.8	5.1	3.5	0.4	0.0	0.0	1.4	2.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				13.9	10.5	9.6	7.4	9.3	0.0	0.0	3.6	4.1
LnGrp Delay(d),s/veh				50.6	39.3	41.3	45.4	9.9	0.0	0.0	4.8	6.0
LnGrp LOS				D	D	D	D	A			A	A
Approach Vol, veh/h					1525			1478			1583	
Approach Delay, s/veh					43.0			16.0			5.2	
Approach LOS					D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	20.9	68.3		30.9		89.1						
Change Period (Y+Rc), s	4.0	5.0		4.5		5.0						
Max Green Setting (Gmax), s	30.0	33.0		43.5		67.0						
Max Q Clear Time (g_c+1), s	16.3	10.0		26.3		20.7						
Green Ext Time (p_c), s	0.6	19.7		0.1		35.0						
Intersection Summary												
HCM 2010 Ctrl Delay				21.2								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
4: Galindo St & Clayton Rd

PM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4III	I					III	I	II	III	
Volume (veh/h)	180	1480	330	0	0	0	0	1220	230	700	970	0
Number	7	4	14				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	190.0	186.3	186.3				0.0	188.1	188.1	188.1	188.1	0.0
Adj Flow Rate, veh/h	191	1574	305				0	1298	224	745	1032	0
Adj No. of Lanes	0	4	1				0	3	1	2	3	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	1	1	1	1	0
Cap, veh/h	200	1775	451				0	1654	492	871	3170	0
Arrive On Green	0.30	0.30	0.30				0.00	0.32	0.32	0.50	1.00	0.00
Sat Flow, veh/h	671	5964	1516				0	5305	1529	3476	5305	0
Grp Volume(v), veh/h	521	1244	305				0	1298	224	745	1032	0
Grp Sat Flow(s),veh/h/ln	1829	1602	1516				0	1712	1529	1738	1712	0
Q Serve(g_s), s	31.2	27.4	19.8				0.0	25.6	13.0	20.9	0.0	0.0
Cycle Q Clear(g_c), s	31.2	27.4	19.8				0.0	25.6	13.0	20.9	0.0	0.0
Prop In Lane	0.37		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	545	1431	451				0	1654	492	871	3170	0
V/C Ratio(X)	0.96	0.87	0.68				0.00	0.78	0.45	0.86	0.33	0.00
Avail Cap(c_a), veh/h	679	1784	563				0	1654	492	871	3170	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.85	0.85	0.32	0.32	0.00
Uniform Delay (d), s/veh	38.5	37.2	34.5				0.0	34.4	30.1	26.1	0.0	0.0
Incr Delay (d2), s/veh	21.7	4.1	2.3				0.0	3.3	2.6	2.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.0	12.6	16.3				0.0	12.6	5.8	10.1	0.0	0.0
LnGrp Delay(d),s/veh	60.2	41.3	36.8				0.0	37.6	32.7	29.0	0.1	0.0
LnGrp LOS	E	D	D					D	C	C	A	
Approach Vol, veh/h		2070						1522			1777	
Approach Delay, s/veh		45.4						36.9			12.2	
Approach LOS		D						D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		82.2		37.8	41.2	41.0						
Change Period (Y+Rc), s		5.0		4.5	5.0	* 5						
Max Green Setting (Gmax), s		69.0		41.5	28.0	* 36						
Max Q Clear Time (g_c+I1), s		2.0		33.2	22.9	27.6						
Green Ext Time (p_c), s		15.9		0.0	3.8	5.7						
Intersection Summary												
HCM 2010 Ctrl Delay			32.0									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 2010 Signalized Intersection Summary
 5: Galindo St & Laguna St/Oak St

PM Peak Hour
 12/10/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	50	20	130	50	260	50	1160	90	70	1110	60
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00	1.00		0.96	1.00		0.96
Parking Bus, 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
Adj Sat Flow, veh/h/ln	190.0	184.5	184.5	188.1	188.1	188.1	186.3	186.3	190.0	188.1	188.1	190.0
Adj Flow Rate, veh/h	54	54	6	141	54	0	54	1261	97	76	1207	64
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	1	1	1	2	2	2	1	1	1
Cap, veh/h	143	143	228	182	191	162	86	2362	182	99	1719	91
Arrive On Green	0.16	0.16	0.16	0.10	0.10	0.00	0.05	0.49	0.49	0.06	0.50	0.50
Sat Flow, veh/h	900	900	1440	1792	1881	1599	1774	4799	369	1792	3444	182
Grp Volume(v), veh/h	108	0	6	141	54	0	54	891	467	76	626	645
Grp Sat Flow(s),veh/h/ln	1800	0	1440	1792	1881	1599	1774	1695	1778	1792	1787	1839
Q Serve(g_s), s	5.0	0.0	0.3	7.2	2.5	0.0	2.8	16.9	16.9	3.9	25.2	25.3
Cycle Q Clear(g_c), s	5.0	0.0	0.3	7.2	2.5	0.0	2.8	16.9	16.9	3.9	25.2	25.3
Prop In Lane	0.50		1.00	1.00		1.00	1.00		0.21	1.00		0.10
Lane Grp Cap(c), veh/h	286	0	228	182	191	162	86	1668	875	99	892	918
V/C Ratio(X)	0.38	0.00	0.03	0.78	0.28	0.00	0.63	0.53	0.53	0.77	0.70	0.70
Avail Cap(c_a), veh/h	529	0	424	316	332	282	228	1668	875	230	892	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	35.2	0.0	33.2	41.0	38.9	0.0	43.7	16.4	16.4	43.6	18.0	18.1
Incr Delay (d2), s/veh	0.8	0.0	0.0	7.0	0.8	0.0	7.4	1.2	2.3	10.7	4.2	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.1	3.9	1.3	0.0	1.5	8.2	8.9	2.2	13.4	13.8
LnGrp Delay(d),s/veh	36.0	0.0	33.3	47.9	39.7	0.0	51.0	17.6	18.7	54.3	22.3	22.2
LnGrp LOS	D		C	D	D		D	B	B	D	C	C
Approach Vol, veh/h		114			195			1412			1347	
Approach Delay, s/veh		35.9			45.6			19.2			24.0	
Approach LOS		D			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	78.2		19.3	9.2	77.5		14.0				
Change Period (Y+Rc), s	4.0	5.0		4.5	4.0	5.0		4.5				
Max Green Setting (Gmax), s	12.0	46.0		27.5	12.0	46.0		16.5				
Max Q Clear Time (g_c+I1), s	4.8	27.3		7.0	5.9	18.9		9.2				
Green Ext Time (p_c), s	0.0	15.7		0.5	0.1	21.3		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			23.6									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
6: Clayton Rd & Fry Way

PM Peak Hour
12/10/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Volume (veh/h)	220	1990	1250	90	170	260		
Number	1	6	2	12	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	188.1	188.1	188.1	190.0	188.1	188.1		
Adj Flow Rate, veh/h	239	2163	1359	85	185	137		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	437	3846	2191	137	242	216		
Arrive On Green	0.24	0.75	0.44	0.44	0.14	0.14		
Sat Flow, veh/h	1792	5305	5104	309	1792	1599		
Grp Volume(v), veh/h	239	2163	943	501	185	137		
Grp Sat Flow(s),veh/h/ln	1792	1712	1712	1820	1792	1599		
Q Serve(g_s), s	9.5	15.0	17.3	17.3	8.2	6.6		
Cycle Q Clear(g_c), s	9.5	15.0	17.3	17.3	8.2	6.6		
Prop In Lane	1.00			0.17	1.00	1.00		
Lane Grp Cap(c), veh/h	437	3846	1520	808	242	216		
V/C Ratio(X)	0.55	0.56	0.62	0.62	0.76	0.63		
Avail Cap(c_a), veh/h	437	3846	1520	808	636	568		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	27.0	4.5	17.5	17.5	34.2	33.5		
Incr Delay (d2), s/veh	1.4	0.6	1.9	3.6	5.0	3.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.9	7.0	8.5	9.4	4.3	3.1		
LnGrp Delay(d),s/veh	28.5	5.1	19.4	21.1	39.2	36.6		
LnGrp LOS	C	A	B	C	D	D		
Approach Vol, veh/h		2402	1444		322			
Approach Delay, s/veh		7.4	20.0		38.1			
Approach LOS		A	B		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	43.0	41.4		15.6		84.4		
Change Period (Y+Rc), s	5.0	* 5		4.5		5.0		
Max Green Setting (Gmax), s	20.86	40.00		29.1		61.4		
Max Q Clear Time (g_c+I1), s	11.5	19.3		10.2		17.0		
Green Ext Time (p_c), s	7.6	9.4		0.9		29.7		

Intersection Summary

HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
7: Oakland Ave/Driveway & Clayton Rd

PM Peak Hour
12/10/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	1750	170	250	890	50	230	60	510	80	60	60
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	0.96		0.93	0.97		0.94
Parking Bus, 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
Adj Sat Flow, veh/h/ln	188.1	188.1	190.0	184.5	184.5	190.0	190.0	190.0	190.0	190.0	190.0	190.0
Adj Flow Rate, veh/h	116	1842	103	263	937	50	242	63	358	84	63	47
Adj No. of Lanes	1	3	0	2	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	0	0	0	0	0	0
Cap, veh/h	147	2410	134	221	1580	84	377	548	434	329	284	212
Arrive On Green	0.08	0.48	0.48	0.06	0.47	0.47	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1792	4970	277	3408	3379	180	1246	1900	1504	952	985	734
Grp Volume(v), veh/h	116	1267	678	263	486	501	242	63	358	84	0	110
Grp Sat Flow(s),veh/h/ln	1792	1712	1824	1704	1752	1807	1246	1900	1504	952	0	1719
Q Serve(g_s), s	5.9	28.1	28.2	6.0	18.9	18.9	17.0	2.3	20.6	6.6	0.0	4.5
Cycle Q Clear(g_c), s	5.9	28.1	28.2	6.0	18.9	18.9	21.5	2.3	20.6	8.9	0.0	4.5
Prop In Lane	1.00		0.15	1.00		0.10	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	147	1660	884	221	820	845	377	548	434	329	0	496
VC Ratio(X)	0.79	0.76	0.77	1.19	0.59	0.59	0.64	0.11	0.82	0.26	0.00	0.22
Avail Cap(c_a), veh/h	251	1773	945	221	820	845	434	636	503	373	0	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.8	19.5	19.6	43.3	18.2	18.2	33.2	24.3	30.8	27.5	0.0	25.1
Incr Delay (d2), s/veh	9.1	1.9	3.6	122.1	3.1	3.1	2.6	0.1	9.5	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	13.6	15.0	6.5	9.8	10.0	6.1	1.2	9.7	1.8	0.0	2.2
LnGrp Delay(d),s/veh	50.9	21.4	23.1	165.5	21.3	21.2	35.8	24.4	40.3	27.9	0.0	25.3
LnGrp LOS	D	C	C	F	C	C	D	C	D	C		C
Approach Vol, veh/h		2061			1250			663			194	
Approach Delay, s/veh		23.6			51.6			37.2			26.4	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	55.7		31.7	11.0	57.3		31.7				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	13.0	41.0		31.0	6.0	48.0		31.0				
Max Q Clear Time (g_c+I1), s	7.9	20.9		10.9	8.0	30.2		23.5				
Green Ext Time (p_c), s	0.1	17.7		3.7	0.0	14.7		2.4				
Intersection Summary												
HCM 2010 Ctrl Delay			34.3									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	50	1240	30	0	1310
Conflicting Peds, #/hr	0	0	0	9	9	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	0	54	1348	33	0	1424

Major/Minor	Minor1	Minor2	Major1	Major2
Conflicting Flow All	1934	699	0	0
Stage 1	1364	-	-	-
Stage 2	570	-	-	-
Critical Hdwy	5.7	7.1	-	5.32
Critical Hdwy Stg 1	6.6	-	-	-
Critical Hdwy Stg 2	6	-	-	-
Follow-up Hdwy	3.8	3.9	-	3.11
Pot Cap-1 Maneuver	104	332	-	258
Stage 1	147	-	-	-
Stage 2	488	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	103	330	-	256
Mov Cap-2 Maneuver	103	-	-	-
Stage 1	147	-	-	-
Stage 2	484	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18		
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	330	256	-
HCM Lane V/C Ratio	-	-	0.165	-	-
HCM Control Delay (s)	-	-	18	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1	0	-

30 April 2014

DOWNTOWN GOING

SPECIFIC PLAN

ATTACHMENT 2



PERKINS+WILL

FEHR & PEERS



ENGINEERS, SURVEYORS, PLANNERS



DAVID J. POWERS
& ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS & PLANNERS

SPECIFIC PLAN

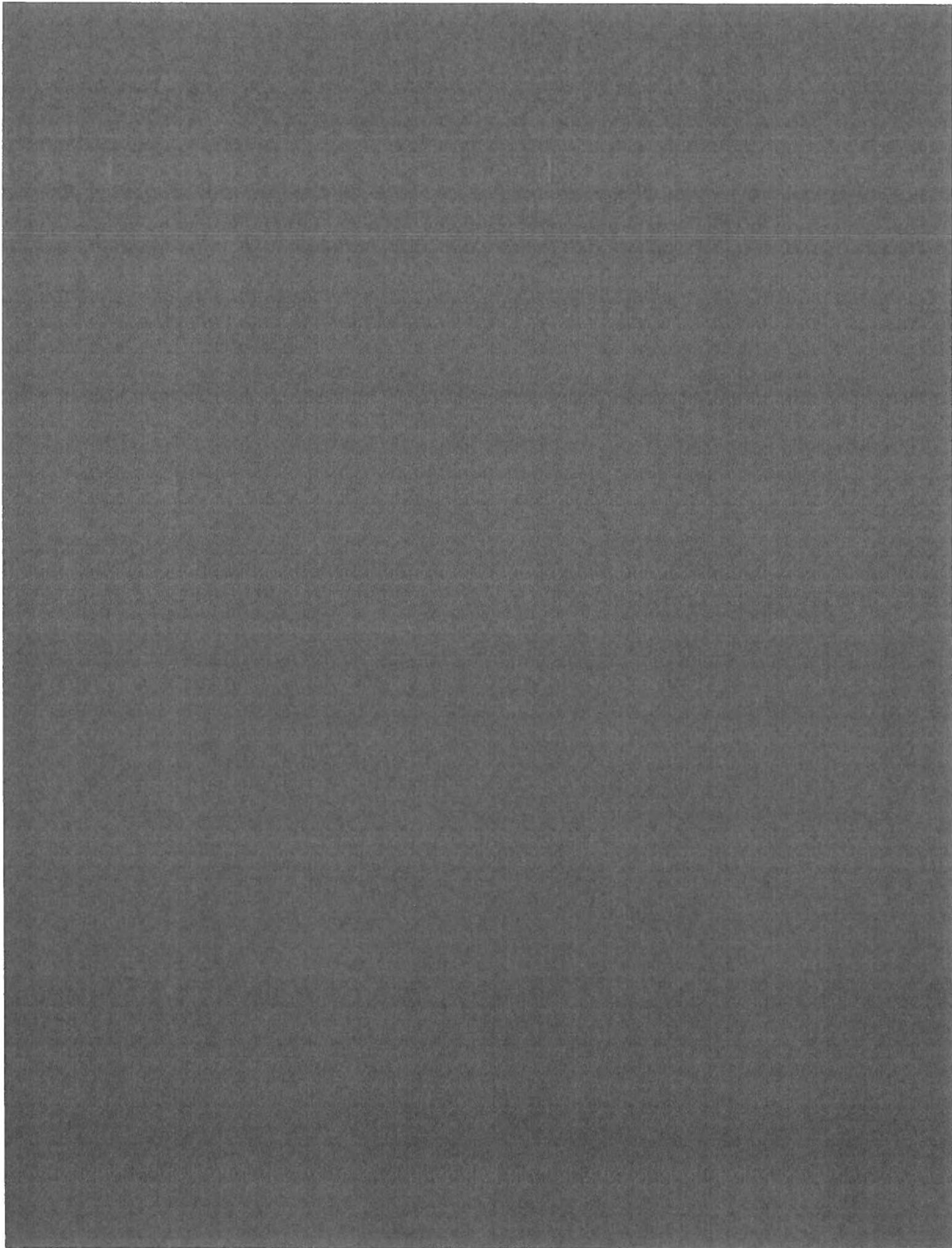


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01 Introduction



Concord, California

1.1 SUMMARY

The City of Concord Downtown Specific Plan articulates a vision for the Downtown, one that draws its ideas from many citizens, business owners, elected officials, and City Staff who participated in the decision-making during the planning process. The Specific Plan envisions Downtown Concord as a modern and vibrant place, one that is infused with a sense of its heritage, brings more residents to live and work in the Downtown, is centered around transit and alternative modes of transportation, provides a diversity of housing opportunities, and preserves the desirable qualities of the City that make it an ideal place to live, work and play.

The policies, diagrams and maps outlined in the Specific Plan are based on the need to revitalize the Downtown, accommodate growth in a future population and employment base combined with a real transportation and urban design vision for the future. The Plan is comprehensive and both short and long-term in terms of its implementation strategies.

PURPOSE

According to California law, Section 65451 of the Government Code mandates that a Specific Plan contain the following:

A Specific Plan shall include a text and a diagram or diagrams which specify all of the following in detail:

(1) The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan;

(2) The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan;

(3) Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable; and

(4) A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out paragraphs (1), (2), and (3).

(B) The Specific Plan shall include a statement of the relationship of the Specific Plan to the General Plan.

The Downtown Concord Specific Plan builds upon the Concord 2030 General Plan, adopted by the Concord City Council on October 2, 2007. In addition to the Specific Plan, the planning effort includes an associated Addendum to the Supplemental EIR to the 2030 Concord General Plan EIR for the Development Code, Implementation and Financing Strategy (FIA) and any necessary revisions to the Concord 2030 General Plan and 2012 Development Code to make this Specific Plan fully operational.

The purpose of the Specific Plan is to set forth policies focused on what is achievable to implement in the Downtown over the next 20 to 30 years and set forth actions to be undertaken by the City.

The Specific Plan purpose is to:

- Establish a long-range vision that reflects the aspirations of the community, and outlines steps to achieve this vision.
- Establish development policies that will guide the Community and Economic Development Department, Community and Recreation Services Department, Public Works Department, Planning Commission, Design Review Board, and City Council decision-making.
- Allow City departments, other public agencies, and private developers to design projects that will enhance the character of the Downtown, preserve environmental resources, promote transit, and minimize hazards.
- Provide the basis for establishing and setting priorities for public investments in the Downtown.

The Specific Plan has been prepared to:

- Address the need for a development framework and account for all modes of transportation for the Downtown.

- Ensure that the Specific Plan reflects the City of Concord's current planning and economic efforts, and includes goals, policies, and desires of the Concord residents and businesses.

- Plan in a manner that meets the future land needs based upon projected population and job growth.

- Help the City achieve the jobs/housing balance objectives, the need for housing in the Downtown, and State law requirements for Concord's allocation of regional housing needs.



Todos Santos Plaza with weekly farmer's market

SUMMARY OF OBJECTIVES + POLICIES

LAND USE/ECONOMIC VITALITY

Objective:

Protect and enhance Downtown Concord's authentic character and historic assets

Major Policies

- The Preferred Plan optimizes the existing structure of the downtown, focuses development on key walkable streets and reinforces pedestrian connections.
- Reinforce Urban Design of the downtown to utilize key features/settings such as Todos Santos and Clay Alley/Adobe to promote revitalization.
- Support small/local business through improvement district financing.

Objective:

Promote high quality infill development that successfully integrates new development with existing development.

Major Policies

- Utilize underdeveloped/vacant sites within the Downtown as infill development.
- Focus on public land disposition for Successor Agency-owned properties.
- Capitalize on the BART parking lots adjacent to the station as new housing opportunities in planning, coordination and partnership with BART.



Sidewalk cafe along east side of Todos Santos Plaza

- Encourage existing property owners to upgrade their properties.
- Follow the key land use designations for the Specific Plan-this is a roadmap for the future development of the downtown.

Major Implementation Strategies.

- Focus development on Oak Street/Galindo Street Successor Agency-owned properties/prepare RFQ/RFP for catalytic/prototype mixed use development.
- Examine potential write down of land costs of Successor Agency-owned properties.
- Focus development efforts on Grant Street.
- Fee reductions/in-lieu fees for affordable housing.
- Entitlements streamlining.
- Re-examine creation of and Market Support for Property Based Improvement District.

DOWNTOWN CONCORD SPECIFIC PLAN

<p>Objective:</p> <p>Reflect early California architecture in the design of new buildings</p> <p>Major Policies:</p> <ul style="list-style-type: none"> • New development to provide consistency in character that enhances and reinforces the existing character of the Downtown. <p>Major Implementation Strategies</p> <ul style="list-style-type: none"> • Design Guidelines to provide clarity for new development in terms of building massing, exterior articulation, and material palette to ensure consistency with the Downtown. • Optimize Design Review Process to reinforce Design Guidelines and Objectives. • Promote Sustainable practices for new and retrofits to existing development. <p>Major Policies</p> <ul style="list-style-type: none"> • Ensure that new development/retrofits adhere to LEED building and CalGreen standards. <p>Major Implementation Strategies</p> <ul style="list-style-type: none"> • Require LEED Silver rating for all new development. • Incorporate sustainable planning/development principles into Downtown Design Guidelines. 	<p>Objectives:</p> <p>Provide a variety of living opportunities through a range of housing types and prices</p> <p>Promote a diverse mix of ages, incomes, and cultures among residents and employees of downtown</p> <p>Major Policies</p> <ul style="list-style-type: none"> • Encourage a diversity of housing types for all different types of users. • Promote higher density housing near transit. • Maintain and create more affordable housing in the Downtown. <p>Major Implementation Strategies</p> <ul style="list-style-type: none"> • Engage a wider range of developers for Successor Agency-owned sites to encourage more diversity in housing development. • Continue to collect in-lieu fees to invest in/ rehabilitate affordable housing. • Reduce parking requirements/flexible parking standards for housing within transit overlay to allow developers to meet market expectations and demand. • Provide density bonuses for amenities (daycare etc...) provided by developers. 	<p>Objective:</p> <p>Create a thriving local mix of boutique shops, restaurants, and cultural destinations with large scale office uses</p> <p>Major Policies</p> <ul style="list-style-type: none"> • Promote mix of uses along key streets for new infill development. • Provide assistance to keep existing businesses vibrant. • Support more art interventions in the Downtown. <p>Major Implementation Strategies</p> <ul style="list-style-type: none"> • Re-implement facade improvement programs for existing businesses. • Market new opportunities to restaurateurs/small business owners. • Reduce fees for local/small businesses for improvements (permit expediting). • Reach out to existing cultural institutions for satellite opportunities. • Work with all the property owners to redevelop the Park & Shop site for long-term commercial/ housing opportunities.
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CIRCULATION

Objective:

Ensure safety by promoting activity in public spaces during both the day and night

Major Policies:

- Focus development at major open spaces such as Todos Santos Plaza.
- Provide more evening/nighttime uses such as restaurants/dining/sidewalk cafes.
- Create more housing opportunities adjacent to public spaces.

Major Implementation Strategies

- Promote mix of uses along key streets for new infill development.
- Provide assistance to keep existing businesses vibrant.
- Support more art interventions in the Downtown, e.g. temporary “Parklets”.
- Provide attractive street lighting, particularly along Grant Street.

Objectives:

Develop a green street framework of pedestrian friendly streets to promote healthy, active lifestyles.

Design and Construct Streets that integrate walking, biking, transit use and green infrastructure.

Connect Downtown Concord to the rest of the region by improving access to and from BART.

Major Policies:

- Design and retrofit existing streets to adhere to Complete Streets and improve accessibility.
- Incorporate bike lanes into major streets that connect through the Downtown, particularly along Grant Street.
- Provide greater ease of use for transit users in the downtown.
- Facilitate a ‘Park One Time’ Parking Strategy.
- Provide a strong connection between major open spaces within the downtown/connections between BART, Todos Santos Plaza and Ellis Park.
- Review light synchronization in the Downtown core.

Major Implementation Strategies

- Focus on redeveloping Grant Street from BART to Todos Santos Plaza as a walkable and pedestrian friendly street.
- Focus on redeveloping Salvio Street from Todos Santos Plaza across Galindo to the Park and Shop.
- Develop a transit circulator shuttle around the downtown with shortened headways.
- Provide more public parking near existing downtown uses- people to park once and walk to their other destinations.



Orchard adjacent to BART parking lot

DOWNTOWN CONCORD SPECIFIC PLAN

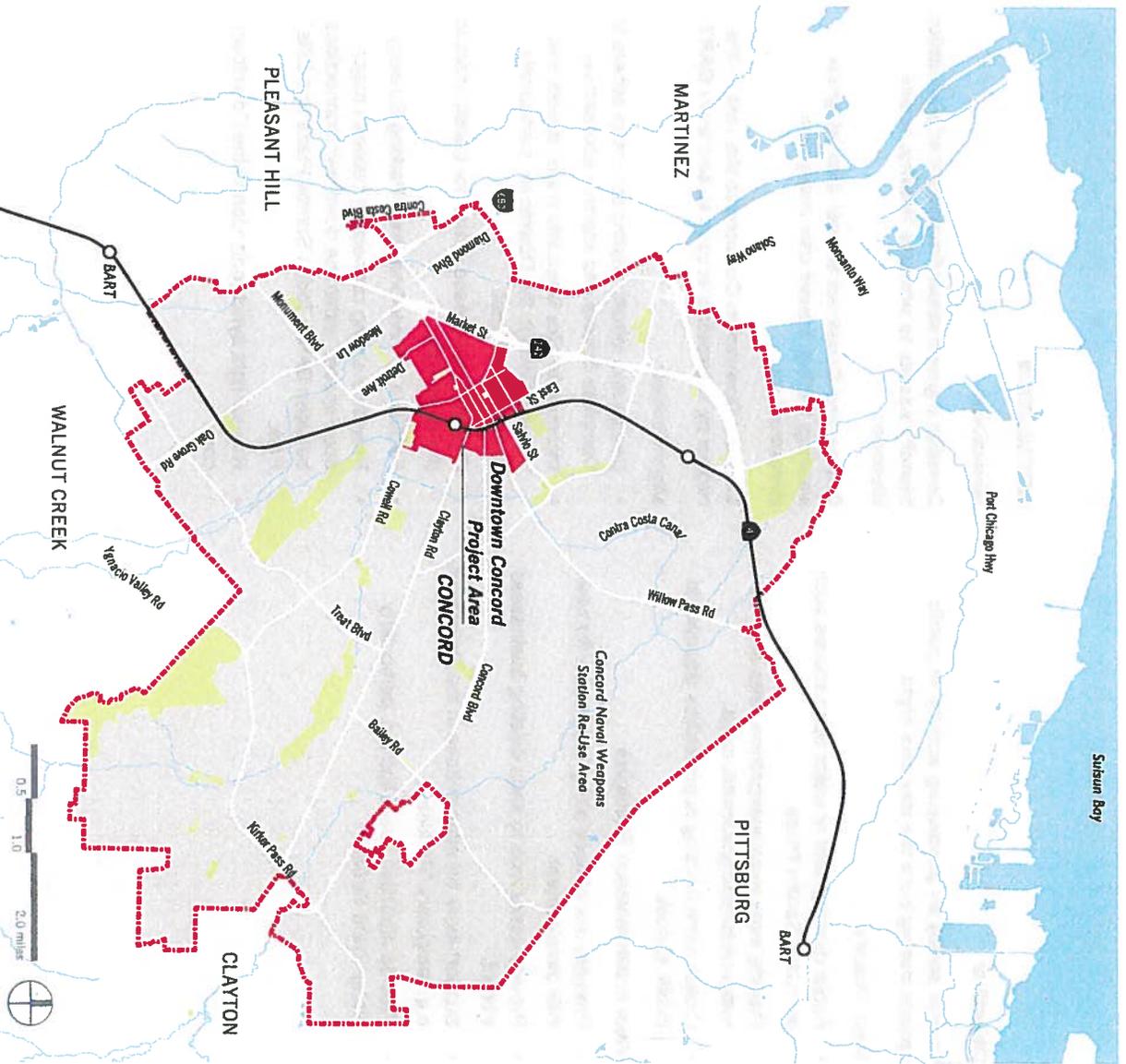


Fig 1.1 Study area location within the City of Concord

1.2 SETTING AND BACKGROUND

REGION

The City of Concord is situated 29 miles east of San Francisco in the north central region of Contra Costa County. Natural features frame the fertile valley in which the City is located; the Suisun Bay stretches to the north, rolling hillsides located to the east and south, and Walnut Creek abuts the southwestern City limits. Neighboring cities include Clayton, Martinez, Pittsburg, Pleasant Hill, and Walnut Creek. Across the Bay to the north lies Solano County, accessible from Concord by Interstate 680, a major transportation arterial that borders the western edge of the City.

Major transportation arterials that transect Concord are Highway 4, Highway 242, and Interstate 680. Highway 4 leads to and intersects with Interstate 80 near Hercules, and to the east also connects to the cities of Antioch and Brentwood. Highway 242 runs north-south, and serves primarily as the connector between Highway 4 and Interstate 680.

Concord has an important role in the regional economy given the assets of the City, including its central location, good transportation, affordable housing and a job center with a skilled labor force that attracts business. Although the region is economically competitive, Concord's assets of transportation, location and affordability provide the potential to increase its' presence as a major center for the region.

CITY

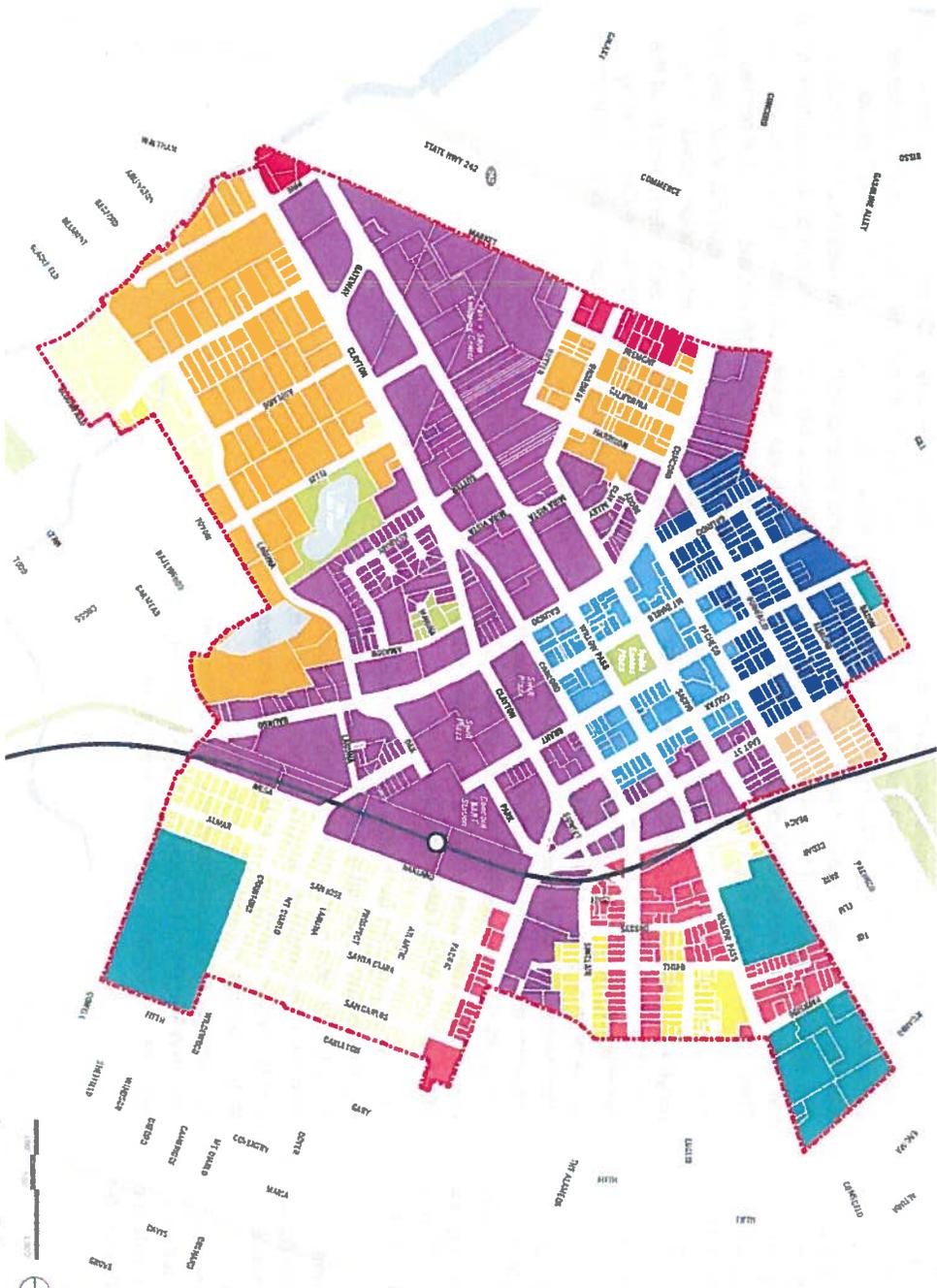
The City of Concord encompasses approximately 19,840 acres or 31 square miles of land. The City limits extend to the Mallard Reservoir in the north and beyond Ygnacio Valley Road in the south. The eastern boundary of the City is defined by the extent of the former Concord Naval Weapons Station (CNWS) (see Fig 1.1).

The City of Concord is made up of several different neighborhoods that are knitted together through streets, open space, and urban form. Various densities, types and mixture of land uses such as residential, office, commercial, industrial, and open space give each neighborhood its defining character and identity. Neighborhoods are important to the city's family-oriented lifestyle, which balances Concord's gracious early California heritage with vigorous, thoughtful development.

The City's General Plan states that one of the most important contributions Concord will make to ensure future economic development is to allocate land for employment development. The ability of the City to grow, develop, provide goods and services to its residents depends, in large measure, on the strength of the local economy. The addition of the CNWS to the City's land supply substantially increases its capacity for employment growth.

Much of the City of Concord's land use pattern can be traced to its evolution as a primary job center within the County, with the focus on Downtown and subsequently on the radiating transportation corridors. Most of the residential development in the City is low density, single family housing, and much of the commercial development is retail related. Office, business park, and light industrial uses are located adjacent to transportation infrastructure. Schools and parks are distributed throughout the residential neighborhoods in the City. Existing Land Use patterns with current zoning districts are displayed in Fig 1.2.

DOWNTOWN CONCORD SPECIFIC PLAN



- RS6: Residential Single Family
- RS7: Residential Single Family
- RM: Residential Medium Density
- RH: Residential High Density
- CO: Community Office
- CMX: Commercial Mixed-Use
- SC: Service Commercial
- RC: Regional Commercial
- DP: Downtown Pedestrian
- NTS: North Todos Santos
- DMX: Downtown Mixed-Use
- PQA: Public/Quasi-Public
- OS: Open Space
- PR: Parks + Recreation

Figure 1.2 Existing Zoning

CENTRAL CONCORD

Central Concord is the historic, economic, and cultural heart of the City. It encompasses the original town site that grew into Concord, and this rich historic legacy is visible in a number of historic sites in the area such as Todos Santos Plaza, the Salvio Pacheco Adobe, and the County Fire House. Central Concord is also a focal point for many key activities within the City. Todos Santos Plaza contains shopping, cultural activities and a pedestrian-oriented scale that provides a main attraction in the downtown. Many of the City's major employers are located in or near the project area. The existing General Plan aims to support many of the roles that Central Concord plays in shaping the City's character and identity.

Central Concord is critical to the future economic development and vitality of the entire City. It contains major transportation infrastructure such as BART and access to major highways. The history, diversity and pedestrian scale along Todos Santos Plaza are assets that the Specific Plan will look to enhance and serve as a catalyst for new development opportunities within the remainder of the project area.

DOWNTOWN

Downtown Concord offers many exciting opportunities for dining, shopping and entertainment as well as a thriving environment for business.

The focal point of the downtown is Todos Santos Plaza. This is a full city block of public open space located four blocks northwest of the BART station. Todos Santos Plaza served as the original public square in one of the earliest blocks of Concord, and was dedicated in 1869 by founders Don Salvio Pacheco, Don Fernando Pacheco and Don Francisco Galindo. It now serves the community as a gathering place for special events such as the Farmer's Market, Music at noon, Music and Market series and holiday celebrations.

The City has supported development of mixed use projects in and around the downtown area that have combined retail, restaurant, office and entertainment uses in and around Salvio Pacheco Square, Todos Santos Plaza and the Brenden Theater. By including a combination of uses, these projects create an active street frontage and an urban building form in the core of the older downtown area. Recent residential projects near BART include Park Central (259 units), Renaissance (132 units) (Phases 2 and 3; 180 remaining units), Wisteria (37 units under construction), and Centre Pointe (100 units).

Economic realities from the Great Recession have significantly slowed progress within the City's downtown over the last five years. Although the City has taken measures to reduce and/or delay fees, these incentives have not proven enough of an impetus until quite recently to promote construction activity. However, since January 2012, the City has observed renewed interest and activity within the downtown. The Specific Plan is anticipated to further facilitate interest in the area by developing strategies and incentives for development and streamlining processing with consistent development standards for the area.

DOWNTOWN CONCORD SPECIFIC PLAN

1.3 SCOPE OF THE SPECIFIC PLAN

The Downtown Concord Specific Plan establishes the location and character of streetscape and public space improvements; the character and intensity of commercial and residential development; and the circulation pattern (vehicular, pedestrian, bicycle and transit) and parking strategy to support businesses and overall vitality, and enhance access and connectivity. The Specific Plan includes standards and guidelines for public and private enhancements to the area, and it offers strategies for financing and implementing public improvements.

In general, a Specific Plan is a tool for the systematic implementation of the General Plan. It effectively establishes a link between implementing policies of the General Plan and the individual development proposals in a defined area. A Specific Plan may be as general as setting forth broad policy concepts, or as detailed as providing direction to every facet of development from the type, location and intensity of uses to the design and capacity of infrastructure; from the resources used to finance public improvements to the design guidelines of a subdivision.

The sketches and photographs in the Downtown Concord Specific Plan are meant only to relay particular concepts as described in the text or make reference to pertinent precedents and should not be considered exact models. Also, the Specific Plan provides standards and guidelines for private and public development, but does not include detailed plans.

1.4 PLANNING PROCESS

In order for the Specific Plan to accurately address community needs and values, a comprehensive public process of obtaining the input of residents, businesses, and property owners as well as City officials and other regional agency representatives was central to the process of preparing this Plan.

This involved the sharing of information and ideas between elected and appointed officials, regional agency representatives, City staff, the planning consultants, and residents and property owners. The following methods were used in preparation of the Specific Plan to ensure the Community's full participation.

Community Workshops: An 'Ideas Fair' was held in September 2012 to understand the thoughts and concerns of property owners, business owners, residents and non-governmental organizations. The first workshop was held in May 2013 and involved presenting existing conditions and alternative concepts into which community members could provide input. Individual stations were set up with boards describing land use options, transportation options, economic development strategies, and key implementation objectives. The second workshop was held in October 2013 to present the Preferred Plan and strategies and allow public input for changes to the Plan. A third workshop was held January 27, 2014 to make available the Draft Specific Plan and the environmental document. Informational sessions were also held at that time to provide additional data to the public.

City Council/Planning Commission: City staff presented updates on the planning process including public comments, issues and opportunities, sketch plan alternatives and strategies, and preferred land use concepts. These

meetings, held on September 24, October 16, 2013, as well as January 15 and February 4, 2014, were open to the public.

Downtown Steering Committee: City staff and planning consultants met regularly with the DSC to review progress on the plan, provide updates, and take key direction for the formulation of the land use, transportation, economic and market policies, and implementation measures for the Plan during eight meetings held between March-October.

City Website: Many of the documents and maps created during the planning process, as well as meeting agendas and staff reports were posted on the City's website.

Technical Advisory Committee: City staff and planning consultants met four times with the TAC between March and September 2013. The committee comprised representatives from various public agencies and interest groups. The initial meeting was held as a round-table to help the design team understand the roles and contributions of the various agencies on the committee. Subsequent meetings were opportunities for the committee to review progress and to provide creative input to the evolving design process. Several members of this committee were also in attendance at the Community Workshops.

Specific Plan mailing list: Those interested in receiving information and meeting notices were placed on the Downtown Specific Plan mailing list.

Availability of all documents and results: The results of all meetings, workshops, and presentations have been summarized and made available to the public. Hard copies are also available in the Permit Center, the City Clerk's office and the City of Concord library.

1.5 DOWNTOWN CONCORD VISION

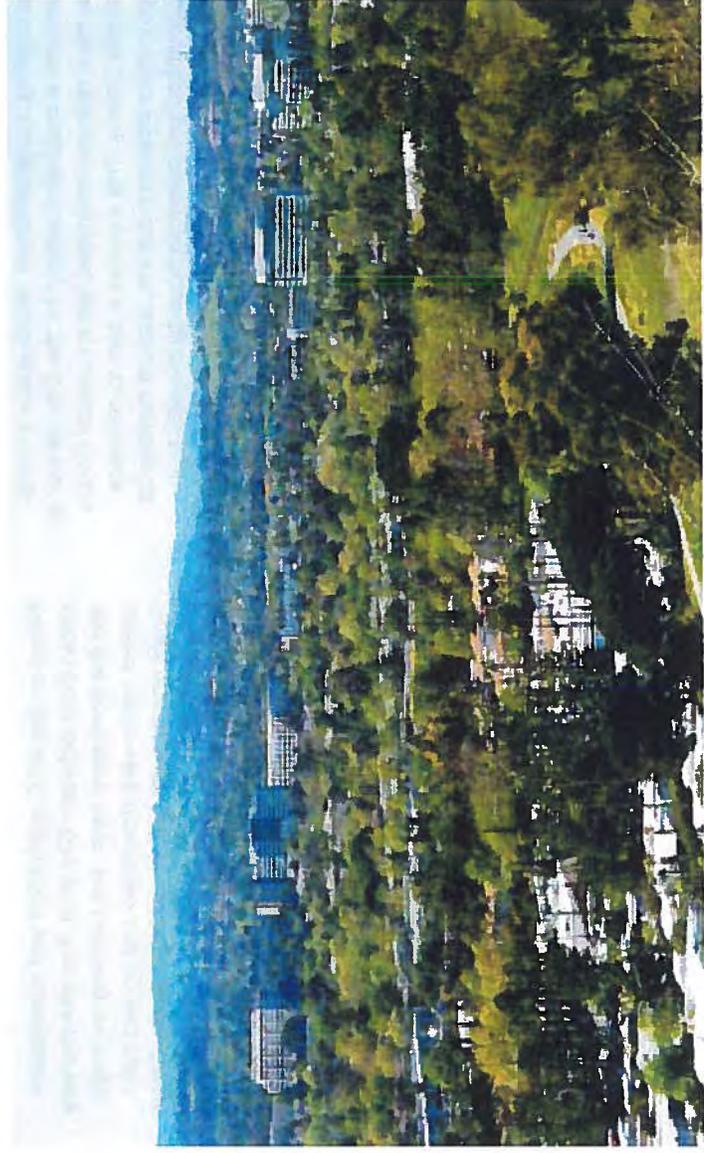
During the course of the meetings and presentations held with the Downtown Steering Committee (DSC), the following Vision Statement for the project was developed and approved by the DSC:

"The Downtown is distinguished by its authenticity and historic assets, preserved and strengthened by the strategic infill of new high quality development that links the past with a vibrant future. The origins of Concord, beginning in 1834 as Rancho Monte del Diablo, are evident throughout Downtown. The central plaza, which retains the City's original name of Todos Santos, is a rare example of the 16th Century Law of the Indies which once dictated the planning and design of Spanish colonial cities.

New buildings demonstrate their respect for the City's heritage through modern interpretations of early California architecture. Thoughtfully blending the old with the new, Downtown Concord is constantly evolving and growing in an organic and sustainable manner.

Downtown Concord is dynamic, safe and attractive to families, businesses, and visitors. It supports a thriving local economy by providing a variety of living, employment, and entertainment opportunities for multiple generations. A mix of boutique shops, restaurants, cafes, and cultural destinations are integrated by a lush green network of pedestrian-friendly streets which ensure activity both day and night.

Grant Street, anchored by Todos Santos Plaza, connects the Downtown to the rest of the Bay Area via the BART Station. It is just one example of the many distinctive streets that have been designed to integrate walking, biking, transit use, green infrastructure, and active storefronts. The synergy created by the diverse mix of ages, incomes, and housing types promotes healthy, active lifestyles and a prosperous community."



Concord, California

DOWNTOWN CONCORD SPECIFIC PLAN

1.6 GOALS + OBJECTIVES

Downtown Concord was designated as a 'Priority Development Area' (PDA) in early 2012, by the Metropolitan Transportation Commission, to promote transit-oriented development. The vision for the Downtown Concord BART Station Priority Development Area (PDA) is to promote Downtown Concord as the historic, economic, and cultural heart of the City in such a way that enhances its strong business climate and bolsters the City's high quality of life. The City envisions the PDA as a bustling, transit-oriented, urban space serving as both a magnet of activity for the City, as well as a more regional commuter hub for central Contra Costa County. This includes a plan to revitalize downtown business districts, expand multimodal circulation and construct housing projects that provide for a: 1) mix of housing types and income levels; 2) attractive sustainable, affordable housing for singles, families and seniors; and 3) housing supported by alternative transportation methods.

This Draft Specific Plan and subsequent EIR will provide further specificity to General Plan and Development Code work that has already occurred. The Final Specific Plan will provide regulatory controls and incentives for the incremental intensification of parcels within the core (1/2-mile) radius of the BART station. One primary opportunity is the amount of vacant and underutilized parcels within the PDA, proximate to the Downtown BART station and north to Todos Santos Plaza.

The Specific Plan will assure orderly development and appropriate capacity of public facilities for the increased density planned downtown. The Plan focuses on development of the area as a major transit hub for the region, providing office, hotel, retail, entertainment, and residential uses within the PDA and identifies strategies to expand the City's economic base by providing housing and employment opportunities and additional revenue to the City.

Based on the MTC application and subsequent discussions between City Staff, key stakeholders and the consultant team, the following six major project goals were developed and agreed upon. Goals one through five were stated by the City in their MTC grant application and goal six was added during the course of discussion with the DSC. These were used as a basis for a comparative evaluation of the three concept alternatives plans during the alternative phase of the project to facilitate the development of a preferred plan.

1. Increasing job creation
2. Enhancing the business climate and expanding the economic base
3. Intensification of uses and densities from current built levels
4. Increasing BART ridership and efficiency of multi-modal connections
5. Constructing housing projects for a mix of housing types and income levels
6. Promoting mid and high-density housing

1.7 REPORT OVERVIEW

This Draft Specific Plan Report is an intermediate phase of the Specific Plan. It follows on from an Existing Conditions Report which was completed in March 2013 and an Alternatives Report completed in July 2013. A full Implementation and Financing strategy will be the subject of a separate report to be issued in July 2014. All of the information in this and previous reports has been/will be used to support the community outreach process (two community workshops and ten Downtown Steering Committee, as well as four Technical Advisory Committee meetings) and as a sound basis for developing the preferred plan upon which the Specific Plan is based.

Data in this report is based on existing sources of material and other background work made available to the consultant team by the City of Concord. It also includes information on demographics publicly available on the City of Concord's website. Photographs and commentaries on existing physical conditions are based on numerous visits to the study area by various members of the consultant team between January and August 2013.

1.8 PROJECT SCHEDULE

This Draft Specific Plan Report is the fifth task of an approximately 18-month study. Major phases of the project are as follows;

Task 1: Project Initiation

January 2013

Task 2: Existing Conditions

January to March 2013

Task 3: Community Outreach

March to October 2013

Task 4: Alternative Plan Concepts & Analysis

March to July 2013

Task 5: Preferred Plan & draft Specific Plan Report

August to October 2013

Task 6: Environmental Review and draft Addendum

September 2013 to April 2014

Task 7: Final Specific Plan and Addendum

April to July 2014

Task 8: Implementation and Phasing Strategy

April to July 2014



02 Planning Context

1.1 LAND USE AND SITE CONTEXT + CHARACTER

The Downtown Concord Study Area is approximately 617 acres in size (see Fig 2.1). Salient features of the project area include the Historic Downtown Core/Todos Santos Plaza which is a major focal point and provides an important sense of place for the entire City. The area contains shopping, retail, and dining/café opportunities for the city's residents, employees and visitors and includes:

- A major BART station directly adjacent to the downtown with transit connections.
- Large Class A office buildings (providing approximately 1.5 million square feet of office space) and higher density zoning near the BART station with ease of access to major highways.
- A diversity of adjoining neighborhoods such as historic North Todos Santos defined by its small scale historic houses.
- Ellis Lake Park, the historic nearby Galindo House, and offers many historic sites/buildings that are dispersed throughout the project area.
- Entertainment such as movie theatres and restaurants that are very accessible and offer more opportunities for activity both during the day and evening.
- Great diversity in housing, from single family to multi-family/high-density, including developments for senior housing and the developmentally disabled.

- Higher density office/commercial zoning near the BART station and along major arterials that connect directly to the highway.
- Walkable and identifiable street grid that defines distinct neighborhoods and districts within the City.

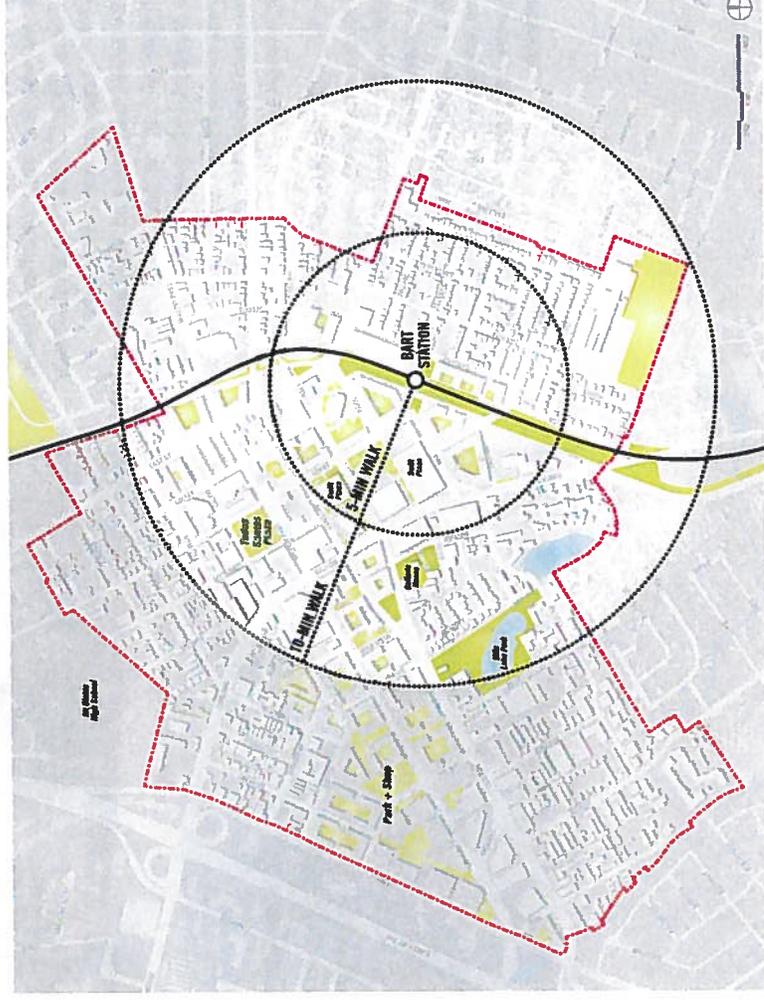


Figure 2.1 Walking radius from BART station

DOWNTOWN CONCORD SPECIFIC PLAN

Retail Character

The study area contains a great diversity of retail typologies, from large format supermarkets and drugstores to shopping malls (Park & Shop) and smaller, fine grain commercial retail that surrounds Todos Santos Plaza.

Office Character

Office space in the study area consists primarily of large floor-plate low-rise and mid-rise office towers, including Swift Plaza, One Concord located directly adjacent to the BART station, and 1800 Sutter Street situated between Clayton and Willow Pass Roads. Located centrally on the site, Swift Plaza is a 15-acre office campus with over a million square feet, with proximity to the BART station and a public open space easement facilitating pedestrian access through the mega-block.

Some low-rise office uses located on and around Todos Santos Plaza indicate the potential for additional, smaller and more flexible office typologies in this area. If developed alongside new housing, new office space located around the plaza could provide the framework to form a truly vibrant, mixed-use, live-work neighborhood with a healthy jobs/housing balance.



Cafe street seating along wide sidewalk



Pedestrian easement through Swift Plaza for mid-block access



Clay Alley retail frontage



Todos Santos Plaza: Surrounding Streetscape

Street Character

Within the project area, there is great diversity of streetscape character. Many streets are fully designed with sidewalks, street lighting and landscaping. These areas are predominantly around the higher density commercial core near the BART station and around Todos Santos Plaza.

One-way streets along Todos Santos Plaza impact the degree of flexibility and accessibility around the plaza.

Many of the neighborhoods that are within the project area have pleasing streetscapes that include sidewalks, parkways and street trees; however some streets lack sidewalk and curbs and inhibit accessible pedestrian connections throughout the downtown.

Galindo Street, Concord Avenue, Willow Pass Road and Clayton Road are generally wider than most of the streets in the project area, and accommodate the largest traffic flow. Improved pedestrian street crossings, particularly within the downtown and adjacent to the BART station, are important considerations for the Specific Plan.



Housing Development south of Willow Pass Road



Pacheco Street converts to one way at Mount Diablo Street



Renaissance housing development



Local Street in North Todos Santos

DOWNTOWN CONCORD SPECIFIC PLAN

2.2 OPPORTUNITIES AND CONSTRAINTS

Issues and Opportunities

Issues:

- The BART parking structure and lot form a barrier to both visual and pedestrian access to the Station. The tracks are bermed at the station area, creating a barrier to the single family neighborhood east of the tracks.
- Grant Street allows both one way and two way traffic as it passes from the BART station to Todos Santos Plaza. A few other one way streets exist throughout the downtown and should be reconsidered to allow for better ease of access.
- Clayton Road, Willow Pass Road, Concord Avenue, and Galindo Street are designed for high volume traffic and truck routes making pedestrian crossing challenging.
- Galindo Street, a wide thoroughfare carrying high levels of traffic, impedes pedestrian access between the Todos Santos Plaza area and the west portion of the project area. However, its pedestrian-friendly streetscape design does facilitate north-south pedestrian access.
- The higher density commercial/office buildings near the BART station limits pedestrian access to the downtown.
- The Park & Shop Center and its large areas for surface parking creates a very extensive barrier between Willow Pass Road and the project area to the north.

- Ellis Lake Park is an important and sizeable open space in the Downtown, but has limited visual access from Clayton Road and the surrounding area.
 - The street grid provides identifiable neighborhoods in most areas, but this identity is lost where the regular street grid shifts and Port Chicago Highway bisects Willow Pass Road and Concord Boulevard at an angle. The triangular blocks created as a result are disconnected from other neighborhoods and are bounded by a series of undefined one-way streets.
 - The overall quality of the streetscape is inconsistent and varies from excellent where new development has occurred, to virtually no pedestrian sidewalks/curbs in some key locations.
 - Limited designated bike paths exist in the project area.
 - Existing single-family homes in the project area are aging.
- Opportunities:
- Todos Santos Plaza is a wonderful and well used public space for the City. It provides key identity and pedestrian activity. Additional development, such as encouraging more housing opportunities, could help the quality and intensity of the retail.

- There are already identifiable neighborhoods such as North Todos Santos to help attract new residents to the downtown.
- Access to the Downtown BART Station is available within a short walk along Grant Street. There is an opportunity to help make the station entrance more visible and accessible for pedestrians walking to BART. Other transit opportunities (buses and shuttles) are situated near BART and provide key access to other parts of the City and surrounding area.
- The City owns several development sites that are near BART, sites that could provide major opportunities for both commercial and housing development.
- There are a number of underutilized parcels between Clayton and Willow Pass Roads, between Port Chicago Highway and Fry Way. Development of these could enhance the vitality of both corridors.
- Given the pedestrian scale street grid that exists throughout much of the project area, new streetscape and bike pathways/networks could be implemented to improve accessibility within the downtown.
- Strong Gateway opportunities exist along Clayton Road both at Market St. and the intersection of Clayton Rd/Concord Blvd.

2.3 CIRCULATION OVERVIEW

The transportation and circulation system for the Downtown Specific Plan area is a critical component to the effective and safe movement of people within the Plan Area, and the surrounding areas.

The Specific Plan area accommodates all travel modes, with an emphasis on pedestrians, bicyclists and transit users. Focusing new development in and around the BART station and downtown core with a diversity of uses in close proximity reduces the reliance on private motor vehicles, helping to minimize traffic congestion, the amount of land dedicated to parking and greenhouse gas emissions.

The Specific Plan envisions the following:

- A vehicular circulation system that accommodates both local traffic and through traffic, but with the flexibility to allow other modes of travel to take priority on certain streets as defined by this Specific Plan.
- An integrated pedestrian network of expansive sidewalks within the study area, with particular emphasis on streets within the pedestrian priority zone.
- A bicycle network that builds upon existing plans and integrates more fully with the downtown and proposed public space improvements in the area.
- An integrated circulation plan that supports transit use.
- A public parking strategy and management plan that efficiently accommodates downtown visitors and supports downtown businesses.
- Flexible parking standards for private development based on current industry standards.

The Transportation chapter outlines and proposes the following goals:

- **GOAL C-1:** A system of complete streets that recognizes the modal priorities of each facility.
- **GOAL C-2:** Efficient but managed vehicle access in the Plan Area.
- **GOAL C-3:** Quality pedestrian facilities and amenities that create a safe and aesthetically pleasing environment that encourages walking and accommodates increased pedestrian activity.
- **GOAL C-4:** A bicycle network with safe and efficient connections to major destinations within the Plan Area and throughout the City of Concord and adjacent communities.
- **GOAL C-5:** Enhanced efficiency and effectiveness of transit in the Plan Area.
- **GOAL C-7:** A parking supply that supports Downtown businesses and stimulates economic growth, while not promoting excessive driving.

DOWNTOWN CONCORD SPECIFIC PLAN

2.4 MARKET OVERVIEW

RESIDENTIAL

Concord had about 47,125 housing units in the City in 2010 with a total vacancy rate of about 6 percent. The number of housing units in Contra Costa County grew by 26 percent between 1990 and 2010 while Concord's housing stock increased by almost 8 percent, slightly less than Walnut Creek (9 percent) and more than Pleasant Hill (5 percent). Housing in the Downtown includes a much higher proportion of multifamily units than the City as a whole. While 71 percent of Concord units are single-family detached (SFD), 57 percent of units Downtown are SFD. This difference is typical of downtown areas. (See Fig 2.2)

FOR SALE HOUSING

The median sale price in Concord for all homes is \$389,200 (as of August 2013). This sale price has declined about 6 percent since 2002, 10 years earlier, and has dropped more than 45 percent since the market peak in 2006. Similar trends are found in nearby cities, though Concord's median sales price decline from the market peak to 2012 was among the steepest and the recovery has been slower than nearby cities. Focusing in on attached, townhomes and condominium units only,

the median sale price in Concord for these types of units is \$115,500. The market for these units has followed the trends seen in for-sale housing in nearby cities, with attached units in Concord dropping in price by two-thirds from the peak of the market to 2012, with a slow recovery which began only in the last 12 to 18 months. (See Fig 2.3)

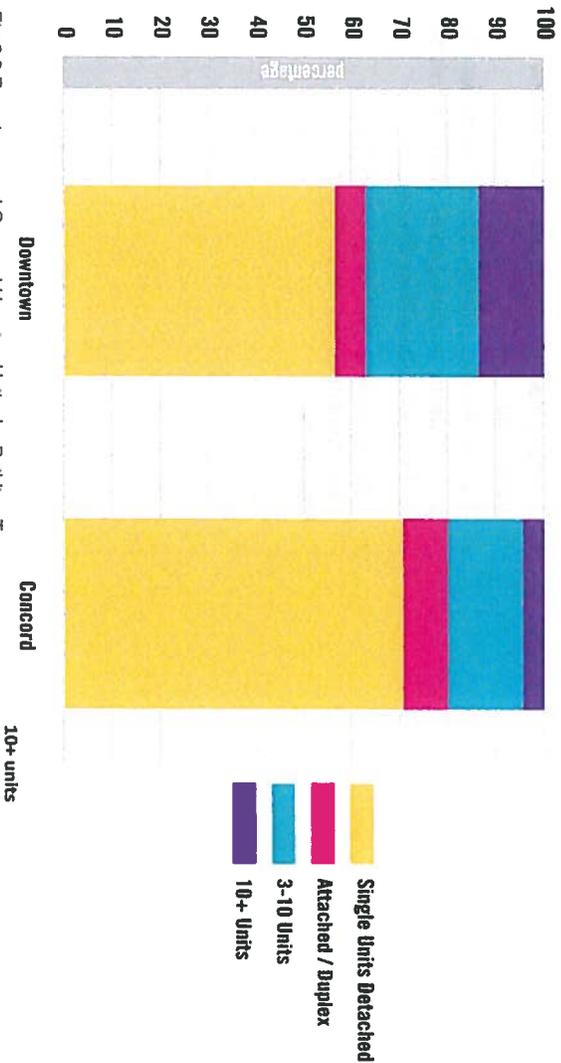


Fig 2.2 Downtown and Concord Housing Units, by Building Type

APARTMENTS

Concord has 37 large apartment complexes (defined as 50 units or more) which supply almost 4,400 residential units. Because of the availability of data for these types of rental units, this section examines rent trends and development over time for these larger complexes. The average rent in these complexes is \$1,288 per unit per month. Out of nine cities surveyed in Contra Costa County, this rate ranks fifth, with San Ramon's \$1,727 average the highest and Antioch's \$1,062 the most inexpensive. Rents in Concord have increased 13 percent between 2010 and 2012 and occupancy rates have increased slightly from 95.6 to 96.3 percent.

Two recent apartment complexes have been developed in the Project Area in the last 10 years, Park Central in 2003 and Renaissance Square in 2008. Unsurprisingly, - given the building age, amenities, and location near BART - both complexes experience high occupancy levels and rent well above the average rate for the City, at between \$1,900 and \$2,235 per unit per month or about \$2.10 per square foot per month. The relatively strong performance of these buildings and the general lack of fully amenitized, multifamily housing in the area suggests strong prospects for new apartment development. (See Tables 2.1-2.3)

Table 2.1
Apartment Performance 2010-2013, Concord Contra Costa County

Unit Type	4Q2010	3Q2011	3Q2012	3Q2013	3 Yr Chg
All	\$1,138	\$1,220	\$1,273	\$1,351	18.7%
Studio	\$859	\$937	\$1,004	\$1,126	31.1%
1bd 1bth	\$969	\$1,040	\$1,082	\$1,160	19.7%
2bd 1bth	\$1,123	\$1,143	\$1,184	\$1,233	9.8%
2bd 2bth	\$1,336	\$1,498	\$1,558	\$1,682	25.9%
2bd TH	\$1,393	\$1,430	\$1,520	\$1,507	8.2%
3bd 2bth	\$1,393	\$1,457	\$1,501	\$1,482	6.4%
3bd TH	\$1,580	\$1,563	\$1,758	\$1,715	8.5%
Occupancy	95.6%	97.1%	96.5%	96.7%	1.2%

*RealFacts; EPS

Table 2.2
Apartment Rent Ranking, Cities in Contra Costa County

City	Average Rent
San Ramon	\$1,905
Walnut Creek	\$1,805
Pleasant Hill	\$1,615
Martinez	\$1,409
Concord	\$1,350
Richmond	\$1,318
San Pablo	\$1,253
Pittsburg	\$1,233
Antioch	\$1,118

*RealFacts; data for third quarter 2013; EPS

Table 2.3
Park Central and Renaissance Square Performance

Item	Park Central	Renaissance Square
Units	259	132
Average sf	905	1,065
Average Rent \$	\$2,076	\$2,286
Average Rent \$/sq.ft.	\$2.29	\$2.15
Occupancy Rate %	93%	95%
*RealFacts 2013; EPS		

DOWNTOWN CONCORD SPECIFIC PLAN

AFFORDABLE HOUSING

According to the 2010 Census, about 64 percent of residents Downtown or about 2,700 units out of 4,200 units are occupied by residents earning less than 80 percent of the Area Median Income (AMI). The Successor Agency to the Redevelopment Agency of the City of Concord supports about 300 of the 2,700 units in the Downtown which are restricted to lower income households. This means that the remaining households earning less than 80 percent of AMI (about 2,400) reside in the Downtown in low-cost housing and/or are putting a high proportion of their income towards housing costs.

COMMERCIAL PROPERTY

While Concord has warehouse, industrial and manufacturing space, this section focuses on office and retail uses, which are the mostly likely to be developed within the downtown Concord Project Area.

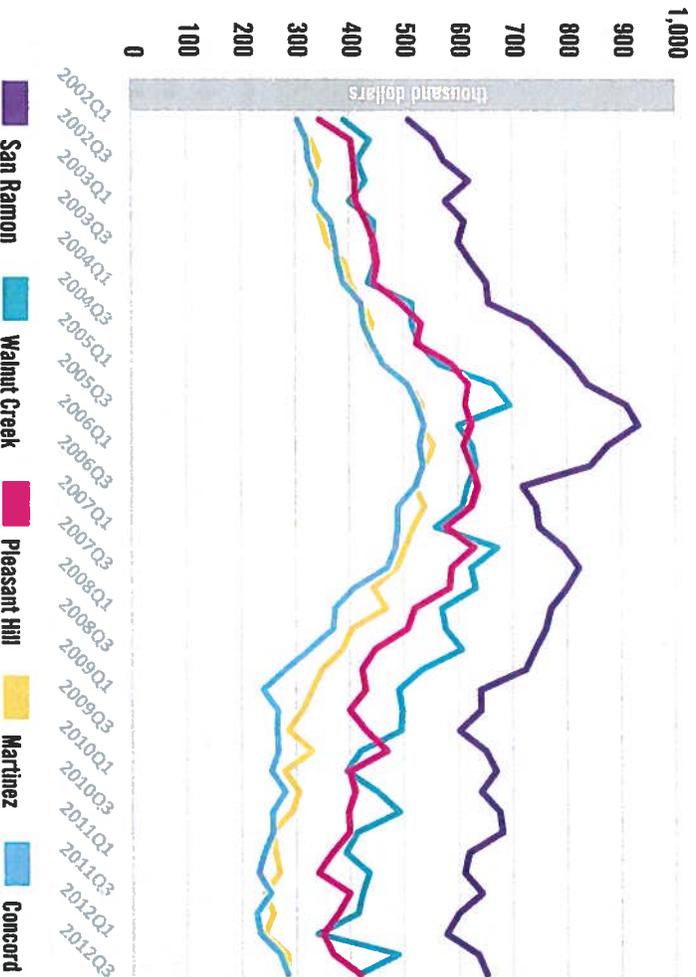


Fig 2.3 Median Home Prices, 2002-2012, Selected Cities

RETAIL

Concord has three main shopping areas—the Sunvalley Shopping Center, the Willows shopping center, and the downtown retail/ restaurant/ entertainment district—in addition to numerous community-serving, big box, and neighborhood shopping centers. Lease rates have not recovered to their pre-recession levels, though retail rates in most cities near and including Concord experienced a small uptick in the average asking lease rate in each of the last two years. (See Fig 2.4)

Retail in the Specific Plan project area is distinct from the rest of the City, providing shoppers a historic downtown experience around Todos Santos Plaza. Activities in the downtown and the resulting lively atmosphere around Todos Santos Plaza have been increasingly positive in recent years, with healthy crowds at eateries and shops during the lunchtime hours. Also, City-sponsored special events—typically scheduled during the warm seasons on the nights and weekends—are well-attended and help to enliven the area.

Lunchtime and special-event crowds support a range of restaurants, bars, entertainment venues, the Brenden Theater, and variety stores. However, areas around the Plaza have more difficulty attracting shoppers and diners after-work hours on non-special event days.

In addition to the retail around the Plaza, the primary shopping area is located in the Park & Shop Shopping Center, a roughly 450,000-square foot shopping center with more than 50 businesses located along Willow Pass Road. Prominent tenants include Fry's Electronics, Burlington Coat Factory, Avenue, and Joann Fabrics along with a variety of restaurants/eateries and general merchandise shops. While average lease rates in the Park & Shop are below the City average and declined during 2012 (ending the year at about \$17.50 per square foot per year), a lack of interest on the part of the multiple owners of the Center in intensifying development at the site indicate that their rates are likely sufficient to cover owners' costs to operate and maintain the buildings as they are. Lower rates may also exist because there is not a unified leasing plan that one would expect under a single ownership. (See Fig 2.5)

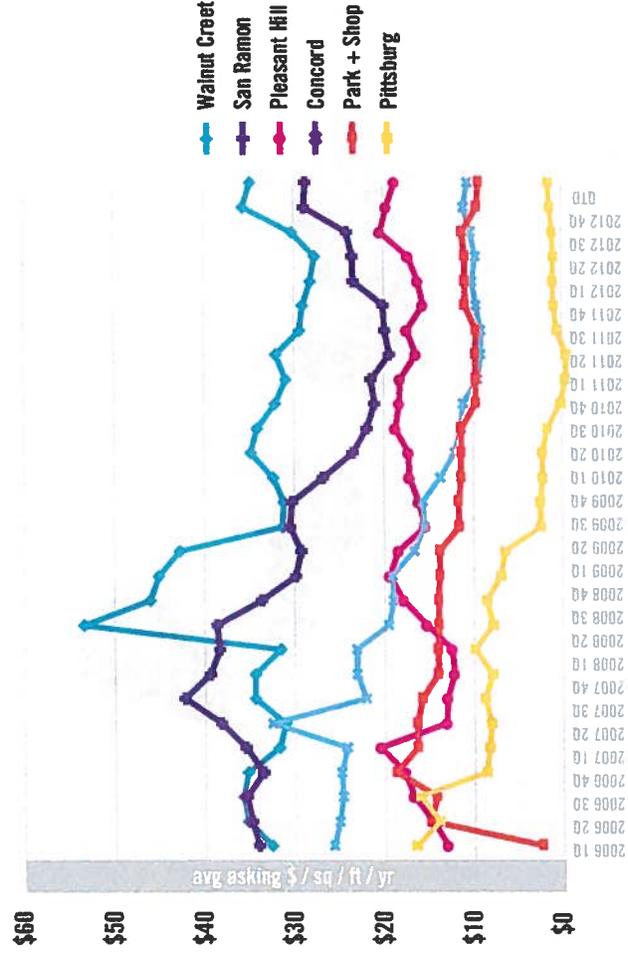


Fig 2.4 Retail Avg Asking Lease Rates 2006-2013

DOWNTOWN CONCORD SPECIFIC PLAN

OFFICE SPACE

The office market in Concord and nearby cities has been recovering from significant vacancies beginning in 2010, when Class A office in the North I-680 corridor office market area (Walnut Creek, Concord, Pleasant Hill, Martinez, Shadelands, Lamorinda, and Alamo/Danville) saw vacancies of 20 percent. Concord's direct vacancy rate is similar to the rate observed in the broader north I-680 market area, at 15.7 percent compared with the average of 15.4 in the market area. Also, lease rates for Class A office in Concord are estimated at \$1.99 per square foot per month compared to \$2.17 for the area. (See Fig 2.6)

Office in the project area has been particularly hard hit during the recession, with several large properties given back to lenders or bought under distressed circumstances including Concord Corporate Centre (347,000 square feet) and the Bank of America campus, now Swift Plaza (1.1 million square feet). These purchases made in distressed financial circumstances mean that the owners can offer low lease rates, driving down market prices for otherwise financially healthy buildings.

From a marketing standpoint, brokers list the following attributes as either positively or negatively impacting downtown Concord's office position and prospects:

Challenges:

Vacancies in key campuses. Bank of America laid off hundreds of people at its Concord campus early in 2012 and has vacated a large portion of the former Bank of America campus (now Swift Plaza). Bank of America will continue to occupy about half of campus at least through 2018. In the two non-Bank of America buildings at the Plaza, brokers have leased a portion of one building to several tenants and are seeking a single, large-user for the other vacant building.

Farther from freeway than competitive locations in San Ramon and Pleasant Hill. Office buildings in downtown Concord are generally about a mile from the freeway. While this is relatively close, it is much farther than competitive office markets in San Ramon and Pleasant Hill and elsewhere, where office buildings are located at freeway exits.

A perception of a lack of safety downtown. Potential Concord office tenants express concern for employees' safety walking to their cars in the winter months, when it gets dark early, and when working late.

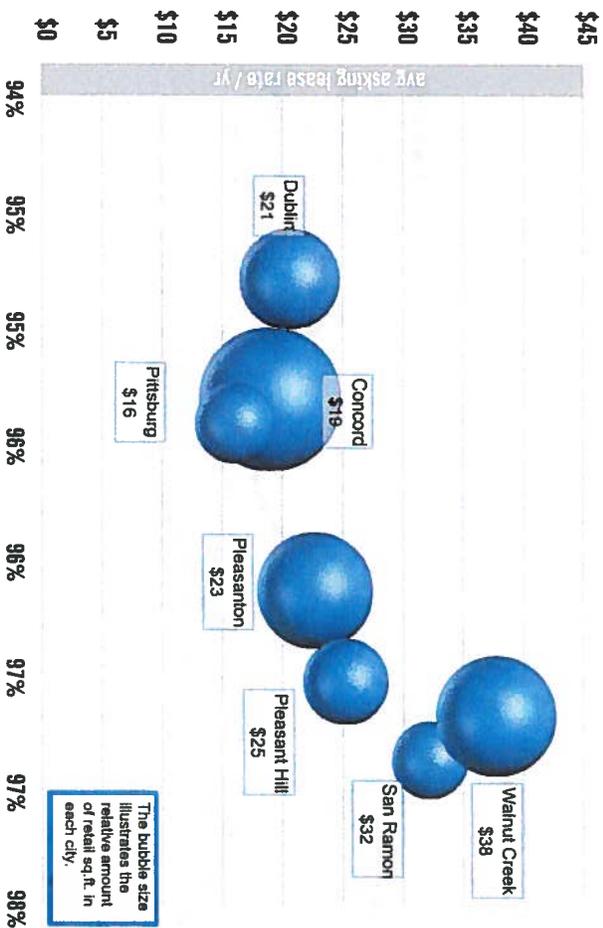


Fig 2.5

2013 YTD Occupancy Rate

Lack of corporate presence after work hours. According to brokers, workers in downtown Concord tend to leave the area after work. A vibrant, after-work atmosphere available for employees is more attractive for certain types of tenants.

Advantages:

Lower price points and larger spaces available. Concord is competitive on lease rates. In addition, Concord is one of a handful of locations in the I-680 area which can accommodate large tenants with significant space needs

Shorter commutes for workers. For companies with workers living in Solano County and East Contra Costa County, Concord's location has significant advantages over locations like San Ramon which is about 30 minutes farther down the highway.

Free parking included in leases. Concord office lease terms typically include free parking, compared to competitive locations which often price parking at \$35 to \$65 per space per month.

Successful City assistance in attracting/retaining businesses. The City has an active and successful economic development program. The City facilitates attraction and retention of major office tenants to Concord, such as encouragement for BevMol to retain and expand its headquarters in Concord. Engagement on the part of the City at strategic points in lease transactions can help tip the scales in favor of locating (or remaining) in Concord.

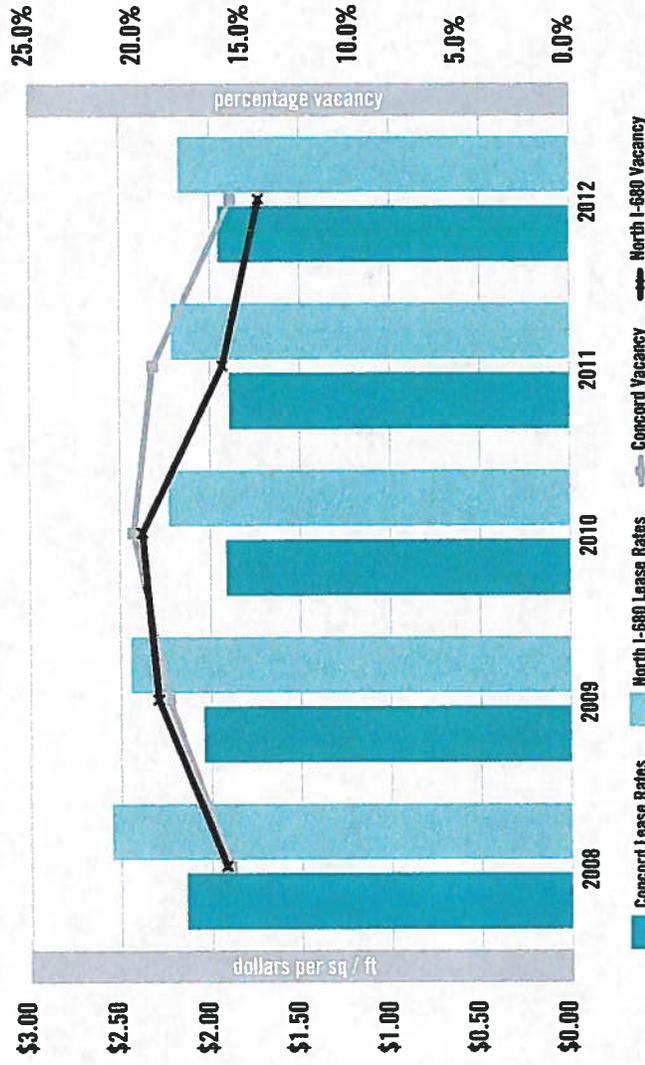
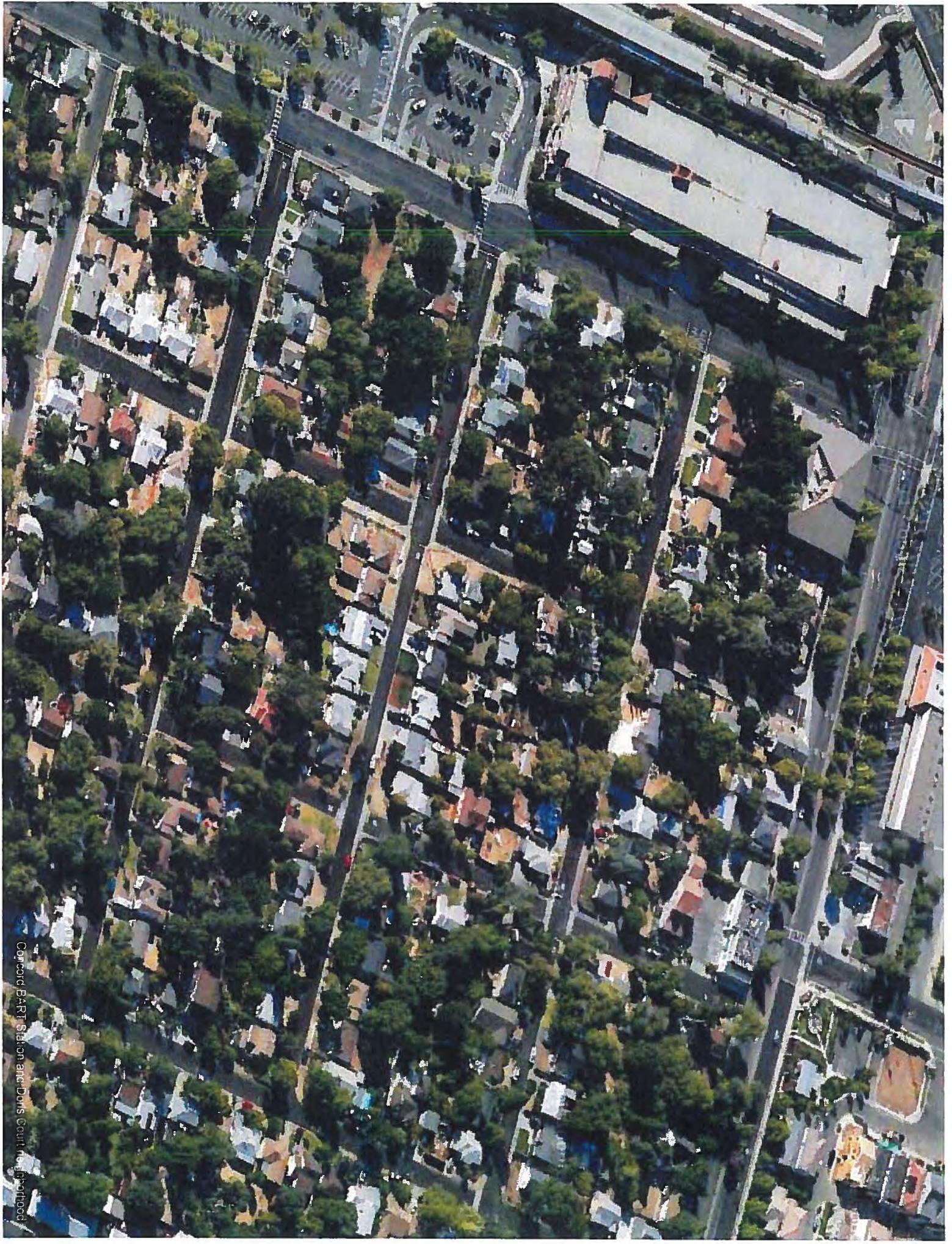


Fig 2..6 Office Lease Rates and Vacancy Rates Concord and North I-680 Market Areas



Concord BART Station and Davis Court Neighborhood

03 Land Use Plan

3.1 OVERVIEW

This Section will describe briefly the Alternative Concepts that were developed during the planning phase of the project, describe the overall Urban Design Framework for the Downtown Area, and will establish the types, zoning and density and distribution of land uses of the Specific Plan for the Downtown.

Also discussed will be employment and population projections that were the basis for the amount and density for development, and specific streetscape and public space interventions that should be implemented as part of the Urban Design Framework development for the Downtown; a description of building character and densities that will be the basis for Design Guidelines in Section 4, and a description for affordable housing and its incorporation into the overall plan for the Downtown.

General Plan Land Use Goals

The City of Concord's General Plan contains the following Land Use Goals as they specifically pertain to the Downtown. It is the intent of the Specific Plan to follow the General Plan's goals and policies regarding Land Use. The following descriptions in this Land Use section will outline how the proposed land uses and urban design proposals specifically address the stated Goals.

Conformance to General Plan Land Use Goals and Policies

The following is a summary of how the proposed Land Use and Open Space Program addresses the City's major General Plan Goals and Policies for the Downtown.

Preserve and Enhance Neighborhood Character

The Specific Plan has land use decisions that reinforce and capitalize on neighborhoods strengths and benefit neighborhood identity and scale. The new development near BART and infill development within the Todos Santos Neighborhood are intended to provide density, but at the scale of existing development.

The Plan identifies opportunities for public/private cooperation and City actions for the mitigation of noise, traffic, and other potential conflicts between commercial uses, multi-family residential uses, and single family residential neighborhoods. The Plan proposes new development to conform to existing zoning consistent with the General Plan Environmental Impact Report.

The Specific Plan proposes a variety of housing types on infill development sites, such as townhomes, courtyard apartments, and live work lofts. New amenities and services that make Concord's neighborhoods desirable places to live are reinforced and enhanced in the Downtown with new boutique retail programs adjacent to existing commercial development. For implementation actions, see LU-3 A-D, ED-2 A-B, and ED-4 in the implementation matrix, Section 7.3.

Promote Viable and Accessible Regional Centers

The Specific Plan provides for the development of regional centers that have an appealing mix of tenants and are designed with site amenities to attract customers from both local neighborhoods and region-wide communities.

The Park & Shop represents such a center and the land use goals for the Plan recognize the current viability of the center. The Plan envisions the center's transformation/reuse to a larger commercial center for the long-term future.

Limited new proposed commercial/office development for the Downtown is intended to expand and enhance the variety of goods and services and is primarily centered around major streets and transit. For implementation actions, see LU-3 I and ED-1 through ED-6 in the implementation matrix, Section 7.3.

DOWNTOWN CONCORD SPECIFIC PLAN

Develop Identifiable and Distinctive Districts within Central Concord

The Specific Plan promotes the Downtown as the economic, social, symbolic, and historic center of the City. The proposed programs and infrastructure investments will continue to expand the Downtown's role as a focal point for business, entertainment, dining, cultural, and civic gatherings.

New improvements for streetscape involves unifying the downtown and its pedestrian amenities, including integrating uses, activating ground floors, and developing key green streets and connections between existing spaces.

The BART station area has been identified as a Transit Overlay Zone and will help provide a key focus for transit riders as well as serve as an identifiable gateway for the City. For implementation actions, see LU-3 C-D, ED-2 A-B, ED-3 C-D, and ED-6 in the implementation matrix, Section 7.3.

Establish a dynamic and diversified office sector

The goal of the Specific Plan is to maintain and expand commercial/office uses within the Downtown in order to provide a resilient economic base for the City. For implementation actions, see LU-2 B-C, LU-3 D, ED-1 C, G-1, ED-3 C and ED-4 C in the implementation matrix, Section 7.3.

Promote Well Designed Development/High Quality Urban Design

The Plan proposes, through Design Guidelines and Public Realm improvements, a cohesive, well-integrated, functional Downtown and ensures compatibility with appropriate height transitions, setbacks, screening, and buffering for uses.

New attractive public spaces such as the BART Plaza, Grant Street improvements, and Salvio Street are proposed to be important backbones of the Downtown and be attractive, inviting public spaces and streets that enhance the image and character of the Downtown. For implementation actions, see ED-2 A-B and E, I-1 A, and I-2 A, D-F in the implementation matrix, Section 7.3.

Preserve Premier Parks and Recreation Facilities

The Specific Plan promotes the preservation of existing open spaces, such as Todos Santos Plaza and Ellis Lake Park, and proposes the addition of the BART Plaza and connecting adjacent open spaced by a greenway trail where possible beneath the BART railway. Enhanced streetscape is proposed to link key spaces and enhance pedestrian access throughout the Downtown. For implementation actions, see T-1 B, I-1 A-B, and I-2 A and F in the implementation matrix, Section 7.3.

City of Concord Housing Element

From the City of Concord Housing Element, the General Plan identifies current housing conditions and needs as follows:

- Household size has varied little over a number of years at 2.7 persons per household
- The City has a lower median income and lower educational attainment rate when compared to the County as a whole
- The housing make-up has stayed the same over the years, with the percentage of single family homes (60%), multi-family homes (30%) and the others remaining constant
- The City's aging housing stock, particularly in the center of the City, demands more resources in terms of energy utilization, conservation and rehabilitation
- Rents are still lower than the surrounding areas

Housing Goals

- Provide diversity of housing supply
- Promote quality neighborhoods
- Meet special needs of the community
- Ensure equal housing opportunities
- Promote energy conservation

Within the City's housing element of the General Plan, each goal has a series of defined policies, with implementation programs for each policy as appropriate.

3.2 SUMMARY OF ALTERNATIVES PROCESS

DEVELOPMENT OF ALTERNATIVES

Three land use alternatives were developed for the Specific Plan area, based on the existing conditions analysis, project vision and the feedback received previously through the community outreach process. These alternatives feature land use options and circulation improvements that are consistent with the community's vision and goals, while weighing the results of the market demand analysis.

Scenarios have been developed to support multi-modal circulation, and address opportunities for intensification, type and quantification of development and TOD-oriented parking strategies. Four key development sites were identified at the outset of the project for consideration during the alternatives design phase. Test fit alternatives have been studied for these key sites, along with other opportunity sites identified by City Staff and the consultant team. These test fits provide information on total development yields, mix of uses and traffic impacts.

The alternatives contrast different overall land use compositions, floor area ratios (FAR) and development densities. Each of the three alternatives includes a summary of development potential. Potential new population and employment figures have been estimated for each alternative.

Table 3.1
Existing Residential Units

Housing Units	Estimated Occupied Units	Persons/ Unit	Estimated Population
4,429*	4,123	2.6	10,700 residents

*includes 179 units of planned Renaissance II

Table 3.2
Existing Office Building Area

Type	Total Area (SF)	Vacant (%)#
Class A	2,200,000	20%
Class B	400,000	10%
Class C	240,000	4%
Total Office in PDA	2,840,000	17%
Total capacity for new employees in existing commercial space	9,278	

Table 3.3
Existing Retail Building Area

Type	Total Area (SF)
Park + Shop	458,000
All other	1,042,000
Total Retail Area in PDA	1,500,000

Existing Development Areas

Existing residential, retail and office development within the Downtown Study Area is shown in Figure 3.1 and Tables 3.1-3.3. Total development in the PDA is estimated based on secondary sources of information. Sources included data from slightly outside of the PDA's boundaries. Estimates shown illustrate the scale of development in the PDA in 2011 rather than absolute amount of development.

The three proposed Alternatives have been designed to redevelop Downtown Concord to be a major destination, district and place for the community. A number of major urban design strategies are integrated in all the proposed alternatives to promote a more walkable, pedestrian-oriented and economically vibrant community for all who will live and work in the downtown.

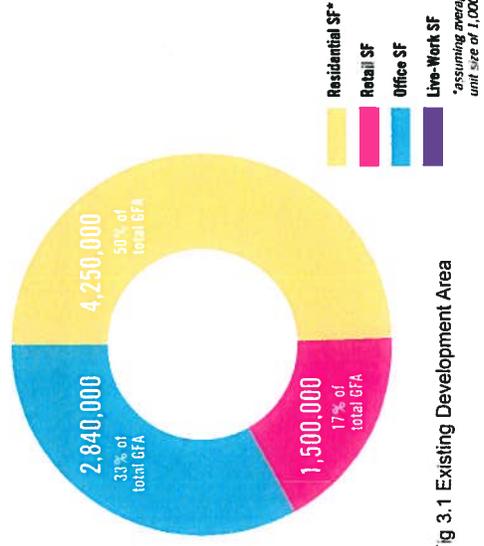


Fig 3.1 Existing Development Area

*assuming average unit size of 1,000sf

DOWNTOWN CONCORD SPECIFIC PLAN

ALTERNATIVE A – JOBS FOCUS

Specific to Alternative A is a focus on developing additional office space to attract new businesses and employment opportunities to Downtown Concord. Leveraging valuable proximity to BART, this alternative would increase the number of regional commuters employed in Downtown Concord. New office space is clustered around the BART station and Highway 242, the two most accessible areas to the site via public transit and vehicle travel.

Office building heights average six stories, with an emphasis on transparent and active ground-floor facades. Complementary ground-floor retail, especially along Grant Street, would add vibrancy and create a truly mixed-use and attractive employment district. Publicly accessible courtyards and plazas within office blocks would be encouraged to increase mid-block connections and access to high-quality open space.

ALTERNATIVE B – HOUSING FOCUS

Alternative B strategically increases the amount of residential units in Downtown Concord. Responding to trends that show increased desire to live close to public transit and retail and employment uses within walking distance, this alternative expands lifestyle options for existing and new Concord residents. Higher residential densities are located on and around BART parcels, within a 10-minute walk of transit, and around Todos Santos Plaza. A small amount of new office space reinforces this new residential development.

Complementary ground-floor retail, especially along Grant Street, would add vibrancy and create a truly mixed-use and attractive neighborhood. Mid-block open space connections would be encouraged in order to shorten walking distances and increase permeability of access between key neighborhood destinations.



Fig 3.2 Alternative A

ALTERNATIVE C – LIVE/WORK BALANCE

Alternative C proposes a tactical balance of new office and residential development. This alternative would increase both employment opportunities and living options within Downtown Concord. Both commuters and new residents would benefit from the study area's valuable proximity to BART. New office space is clustered around the BART station and Highway 242, the two most accessible areas to the site via public transit and vehicle travel, while key portions of these areas would also be dedicated to new housing.

Both office and residential buildings should limit setbacks and feature transparent and active ground-floor facades. Complementary ground-floor retail, especially along Grant Street, would add vibrancy and create a truly mixed-use neighborhood. Publicly accessible courtyards and plazas within office blocks, as well as mid-block open space connections through residential blocks would be encouraged in order to increase permeability and shorten walking distances between key neighborhood destinations.



Fig 3.3 Alternative B



Fig 3.4 Alternative C



Pedestrian-friendly Todos Santos sidewalk arcade



BART western surface parking lot

3.3 URBAN DESIGN FRAMEWORK

The Specific Plan and its associated land uses consist of a strong Urban Design Framework to create a vibrant public realm and sense of pedestrian orientation and identity within the Downtown. This is critical to help bring new development and investment into the Downtown. Primary concerns are to create strong linkages between the various areas of the Downtown and BART, and create a strong urban form that will activate ground floor uses and create activity along city streets. The key urban design strategies take advantage of the existing open spaces, historic structures, streets and blocks within the Downtown.

The BART station and associated track creates a significant divide within the urban form of the city, where higher density commercial programs exist on the northern side, while single family residential exists to the south. The length of the station platform and associated track way limits good connections between these two distinct portions of the project area.

Areas that surround an existing open space, such as Todos Santos Plaza and Ellis Lake Park have a strong neighborhood feel and sense of place that provide a unique setting for development. These are well enjoyed assets by the residents of Concord that the Specific Plan can build upon.

URBAN FORM

The urban form around Todos Santos is defined by buildings ranging from low rise/single story to three stories and has active ground uses that support the activity and vitality of the plaza. Higher density office commercial is predominantly situated near the BART station and Clayton Road. These tall buildings do provide a sense of skyline to the City and surround Todos Santos Plaza on three sides, creating a low rise/pedestrian center to the City.

On many parcels in the downtown that are in transition there are large differences in scale that create a strongly fragmented character to the urban fabric.

Residential neighborhoods such as North Todos Santos have strong character and walkability. Where these neighborhoods meet the commercial zones, there are opportunities for higher density housing/larger footprint buildings that can help contribute and transition to the surrounding neighborhoods.

DOWNTOWN CONCORD SPECIFIC PLAN

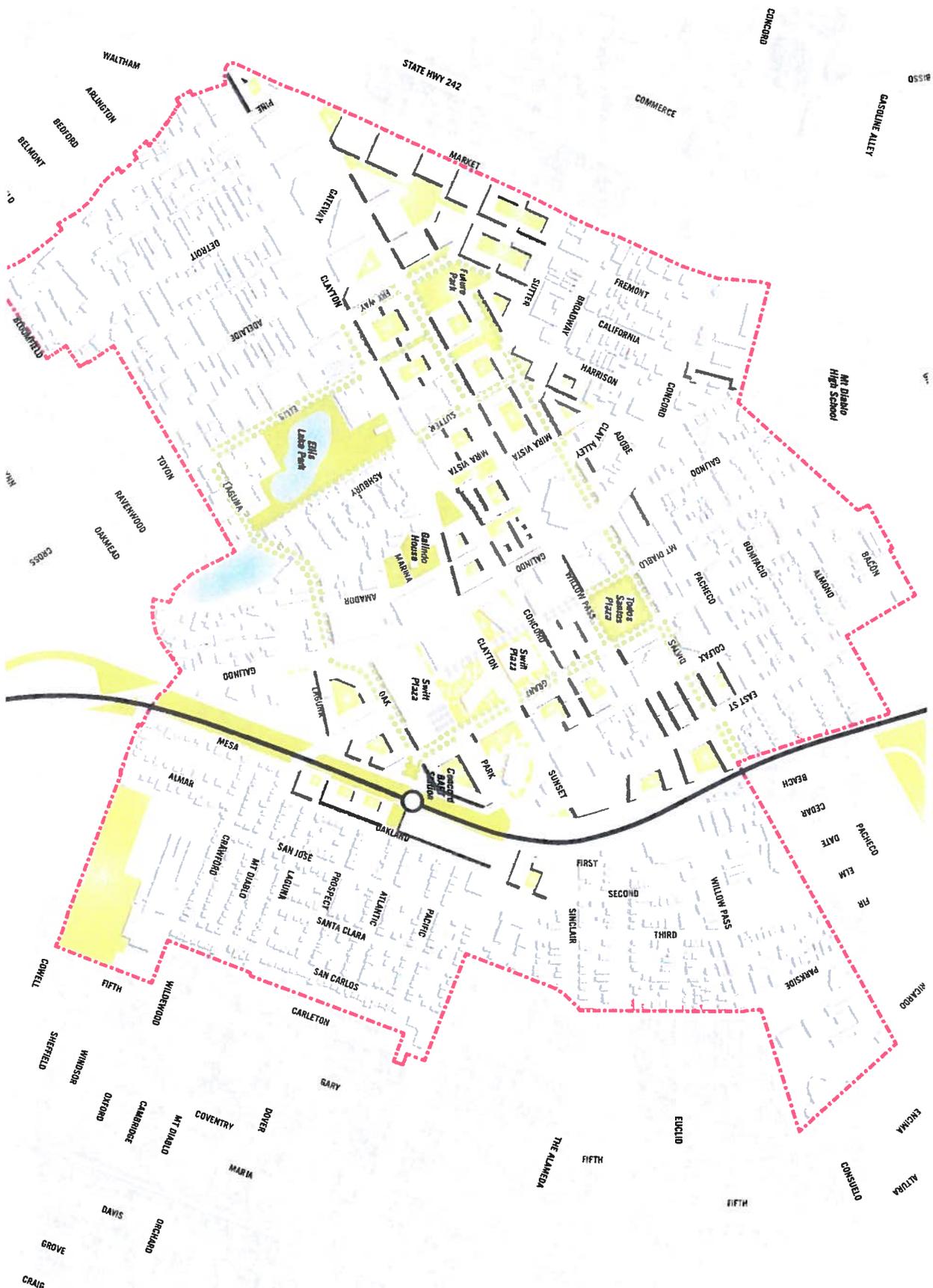


Fig. 3.6 Overall Illustrative plan

URBAN DESIGN STRATEGIES

The Specific Plan assumes that a strong urban character and sense of identity is important for the revitalization of the Downtown. Through the planning process, the following key strategies have been identified for implementation. These strategies are articulated in greater detail in the Public Space and Streetscape Proposals section of this Plan. The strategies are:

- Redevelop the BART station area as a mixed-use area with higher density development that will take advantage of the major transit opportunities in the area, as well as its proximity to the existing downtown and Todos Santos Plaza.
- Provide higher density residential and commercial developments on underutilized and vacant sites that are located in the downtown and near major transit stops. Higher development densities will accommodate more residents in Downtown Concord, support additional retail and economic activity, sustain and/or increase BART ridership, increase public safety and create an overall more vibrant quality of life.
- Specific development emphasis to be at the BART station, Todos Santos Plaza, the Park and Shop, and the sites between Willow Pass Road and Clayton Road.

- Provide a greater diversity of housing and development types including market rate and affordable apartments, condominiums, townhomes and live-work lofts.
- Enhance the streetscapes on key streets that link major open spaces and destinations throughout the downtown.
- Redevelop Grant Street as a key linkage between the BART station and Todos Santos Plaza. This street will allow for better visibility and pedestrian orientation, as well as being a vital commercial link. It will be designed to provide more consistent travel lanes, bikeway and parking to promote more vitality along its length
- Redesign the entrance to the BART station to provide easier accessibility and visibility from Grant Street. Open the connection between the east and west side of the BART station to allow for more pedestrian access from adjacent residential neighborhoods.
- Develop the area below the BART tracks as a new pedestrian/bike path open space to complete the connection and to facilitate ease of access to the BART station from other underserved areas of the downtown.

- Define a new district for the downtown around the Pacheco Adobe and Clay Alley as new mixed-use retail environment (restaurants, artisanal local retailers, small-scale art and music venues, etc.) to take advantage of the existing investments such as the movie theatre, Salvio Street streetscape improvements and the nearby parking garages.
- Develop Salvio Street between the Park & Shop and Todos Santos Plaza as a new commercial street and connection to the western area of the downtown. Salvio Street was historically Concord's "Main Street" and the plan alternatives attempt to revitalize this street to reclaim its importance in the downtown.

DOWNTOWN CONCORD SPECIFIC PLAN

GREEN STREETS FRAMEWORK

The City's setting, within a valley surrounded by gently sloping foothills and crossed by creeks, includes natural resources that are important, not only for their aesthetic value, but also for improved environmental quality, habitat protection and water resources.

In addition, using open space within the project area to foster a sense of community, affords current and future residents an understanding of the City's natural setting and native topography, and will help to provide an important amenity to attract people to live and work in the project area. The project area contains Todos Santos Plaza, Ellis Lake Park, and Swift Plaza as major open spaces to be connected. Other areas, such as the BART Linear Park, provide open space opportunities, although are not officially designated public open spaces.

Todos Santos Plaza is the primary open space within the Downtown, but in order to support new land uses the Specific Plan proposes new plazas at the BART station, a new plaza around the Pacheco Adobe, and development of strong streetscape program that will provide a high degree of walkability in and around the various destinations of the Downtown.

The proposed open space framework connects existing parks and open spaces through green streets, pedestrian and bicycle paths and improved landscaping. Improved open space below the BART rail line will increase safety and provide regional connections to the north and south. New pedestrian connections across Willow Pass and Clayton Roads will connect the Ellis Lake neighborhood to shopping and employment areas.

The Specific Plan proposals for new streetscapes incorporate a comprehensive "Complete Streets" approach for key streets within the Downtown to enhance connectivity and provide for better pedestrian and bicycle opportunities. This policy has already been adopted by the City of Concord. Key streets for redevelopment are Grant Street, Salvia Street, and Willow Pass between Galindo and East Streets.



Green Street



Ohlone Greenway, East Bay



Green Street, Portland



Pedestrian & Bicycle Greenway



Fig. 3.7 Green Streets framework

DOWNTOWN CONCORD SPECIFIC PLAN

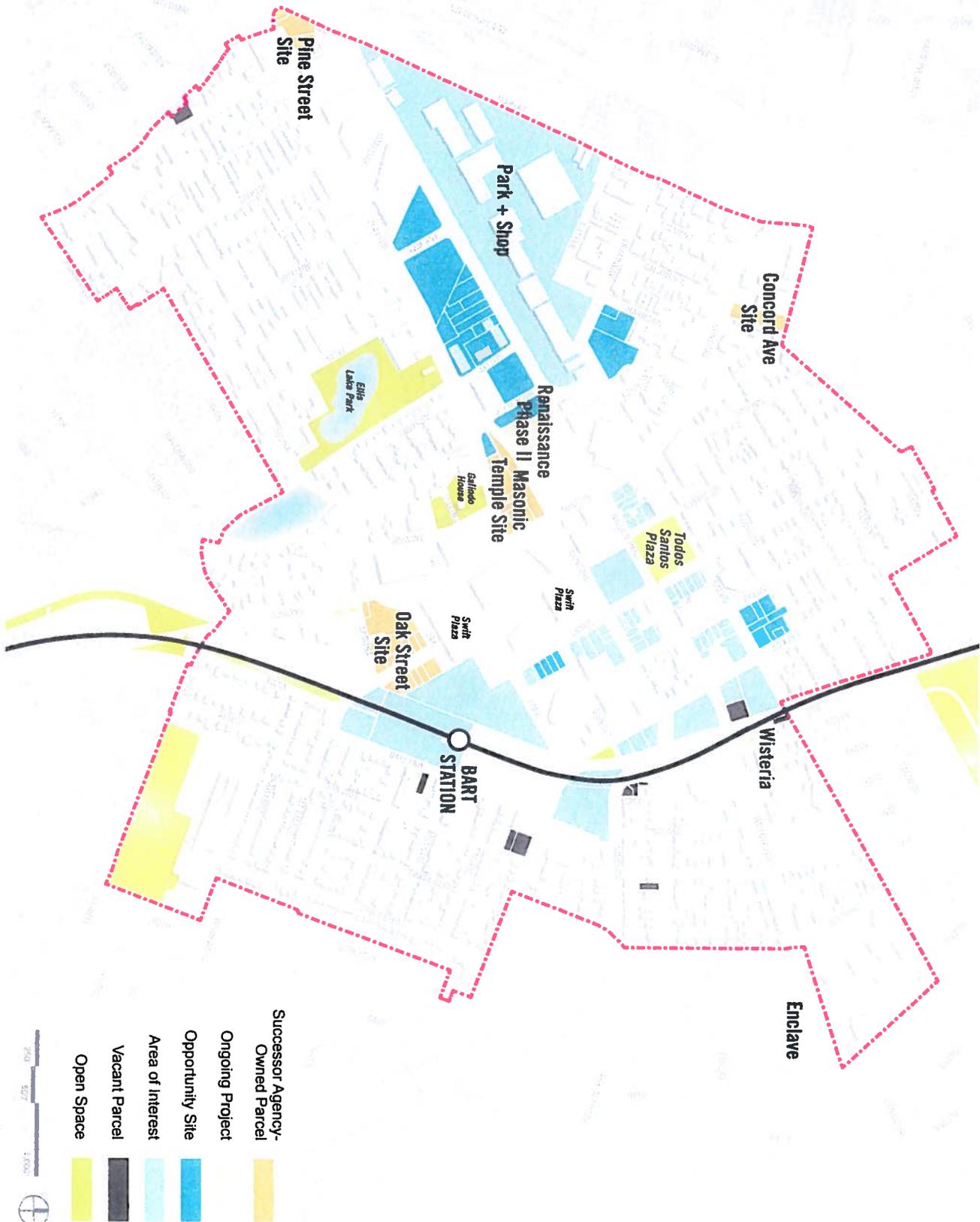


Fig. 3.8 Ownership

3.4 LAND USE AND PROGRAM

Following a public comment period, on July 22nd, 2013 the DSC arrived at the Preferred Alternative based on the analysis and evaluation methodology outlined in Section 8 and Table 8.1. The Preferred Alternative represents most of the land uses and development program shown in Alternative B—Housing Focus (see Figure 3.3). This Land Use and Program section describes this preferred Specific Plan in detail.

The key goals for the Specific Plan as they relate to land use are the following:

- Provide a variety of living opportunities through a range of housing types and prices
- Create a thriving local economy by mixing uses; boutique shops, restaurants, and cultural destinations with larger scale office uses.
- Promote high quality infill development that successfully integrates the new with the existing

KEY OPPORTUNITY SITES

Key opportunity sites located within the study area have the potential to act as catalysts for additional infill development. The City's Housing Element (Nov. 2010), identified 33 vacant and underutilized sites within the Downtown PDA boundaries projected to accommodate approximately 2,480 units. Several additional downtown sites, not previously identified, could accommodate an additional 420 to 600 units.

The Successor Agency to the Redevelopment Agency owns four key sites shown in Figure 3.8 including: 1) the Oak Street Site; 2) the Masonic Temple Site; 3) the Concord Ave. Site; and 4) the Pine Street Site. These sites have potential to be developed with a wide range of housing types and employment center projects and would provide the critical mass necessary through increased densities to attract residents and employers alike.

Given the Successor Agency's ownership of these sites, development of these sites should be considered as first phase implementation strategy. City staff prepared a Long Range Property Management Plan that governs the disposition of these former Redevelopment Agency properties. The Successor Agency Board recommended approval to the Oversight Board in December 2013, and the Oversight Board approved the Plan in February 2014 and the Plan was forwarded to the State Department of Finance for review.

The Land Use Plan strategically increases the amount of residential units in Downtown Concord. Responding to trends that show increased desire to live close to public transit and retail and employment uses within walking distance, the Plan proposes that, by expanding housing availability and options within the downtown, it will develop new vibrancy and pedestrian activity.

Higher residential densities are located on and around BART parcels, within a 10-minute walk of transit, and around Todos Santos Plaza. A small amount of new office space reinforces this new residential development.

Complementary ground-floor retail, especially along Grant Street, would add vibrancy and create a truly mixed-use and attractive neighborhood. Safe mid-block connections would be encouraged in order to provide a safe, short walking distance and increase permeability of access between key neighborhood destinations.

The following plan (Figure 3.10) illustrates the major land uses and program that is proposed for the plan. Given that the Downtown has an existing development framework with streets in the place, land use and development was considered based upon market analysis, how best to leverage transit options, and how to take full advantage of existing amenities such as Todos Santos Plaza.

DOWNTOWN CONCORD SPECIFIC PLAN

BART STATION AREA

The BART Station is a major area for development. Given the large areas of undeveloped land that are adjacent to the BART station, this is a primary area for investment. The Successor Agency currently owns a group of parcels totaling approximately 4 acres directly adjacent to the BART station, currently used as surface parking. The lots represent a substantial amount of potential land development.

Having a strong transit-oriented development in this area with higher density residential and mixed-use buildings would provide a key destination within the Downtown and help to revitalize Grant Street as an important pedestrian street and major gateway and connection into the Downtown. Key active commercial uses such as retail, an athletic club or other compatible uses could activate Grant Street. Some mixed-use office use could be supported as well in the area, but given the current vacancies of the existing office spaces in the area, residential uses would be more suitable to meet market demand.

TODOS SANTOS PLAZA

Todos Santos Plaza is the historic heart of the downtown. Although it is surrounded primarily by retail and office uses, the Plan proposes to introduce more residential into the area and adjacent to the Plaza. Having more residents living directly adjacent to the Plaza and all its existing activities will help to develop more vitality and more people who support the local retail.

This area is only a short walk to the BART station and other transit options making it highly desirable

as a potential transit-oriented development.

Opportunities to provide more live-work uses/loft type buildings should be considered in the area as the Plaza is a draw and destination for many different types and ages of people. As will be discussed in the Affordable Housing Strategy section of this Plan, it is a key goal to provide a diverse mix of housing types and affordability levels to support a wide range of population within the Downtown. The City should also consider incentivizing the development of key housing prototypes/unique housing structures that could become catalysts for other types of housing units in the Downtown.

GRANT STREET

Grant Street is the primary connection from Todos Santos Plaza to the BART station, it is important that underutilized/vacant sites (such as the blocks along and between Willow Pass) have residential uses/ground floor retail that can be successful in activating the street. These interventions should be implemented in tandem with a comprehensive streetscape strategy along the corridor.

SALVIO STREET/PACHECO ADOBE

The redesign of Salvio Street is predicated upon centering mixed-use development around the historic Pacheco Adobe, creating wider sidewalks, and utilizing the area along Clay Alley to create a different and smaller scale retail/outdoor dining environment and destination within the Downtown. New higher density mixed-use development is proposed for both sides of Salvio Street and around the Pacheco Adobe where opportunities exist.

Given the area's proximity to the Park & Shop, the existing restaurants and retail near the movie theatre, and Salvio's direct connection to Todos Santos Plaza, this area has a great opportunity for redevelopment. There is already an established residential neighborhood in the area and enhancing this area with all its existing key assets would help bring a significant amount of people into the Downtown.

PARK & SHOP

This area within the Downtown represents a significant amount of redevelopment potential. Although the current retail supports an existing clientele and generates adequate tax revenues, given its location to the freeway and its proximity to Todos Santos, it is considered an underutilized site.

In the Specific Plan, both a Phase 1 and Phase 2 plan is defined. Phase 2 consists of the Park & Shop properties. Given the importance of size and scale of the area, the Plan has noted the development on this area as a separate phase.

The Plan recognizes that there are many long-term leases and property owners associated with the site, and so short/mid-term development is unlikely, but the City should consider this site as part of its longer term vision for the Downtown.

The site is large enough to accommodate both commercial/office/retail and higher density residential development. Given its proximity to the freeway, more visible commercial/retail would be more suitable- such as larger format retail and higher density commercial office buildings.

CULTURAL AND HISTORIC RESOURCES

The project area has a rich collection of historic sites and spaces that recall Concord's important role in the formation of the area. Many of the historic resources in Concord that date back to the days of its founding are located near Todos Santos Plaza.

Many of the historic buildings reflect its changing role through time as a center of agriculture, military activities and commercial activities. The project area contains one registered site on the National Register (Francisco Galindo House). The Specific Plan, within the urban design framework, showcases these sites, such as the Pacheco Adobe, to provide a continued visual sense of history of the Downtown.

SCHOOL AND COMMUNITY FACILITIES

The General Plan for the City of Concord states that, given the limited amount of suitable vacant land available and the fact that most schools have sufficient capacity to absorb the projected growth, no new sites for school facilities are proposed within the Specific Plan area. Schools in the project area include Olympic High School and Meadow Homes Elementary School. The Central library is located at 2900 Salvio Street, adjacent to City Hall, and is an important community facility for the project area.

SPECIAL LAND USE TOPICS

Community members expressed interest in limiting certain types of uses for a variety of reasons, including limiting competition with independent retailers, limiting uses that can generate higher amounts of traffic, such as big-box retail, and ensuring a desired retail mix in the Downtown.

Several mechanisms exist for limiting uses that might otherwise dominate the land use mix and impede desirable uses in particular area, including:

- Limiting the size of specific types of uses (i.e. individual establishments). This has the advantage of being relatively simple to enforce through individual building permits.
- Limiting the number of specific types of uses (e.g. no more than 'x' number of fast food chains in the project area)
- Limiting the total square footage of specific types of uses in a particular area (no more than x amount of commercial/office square footage).

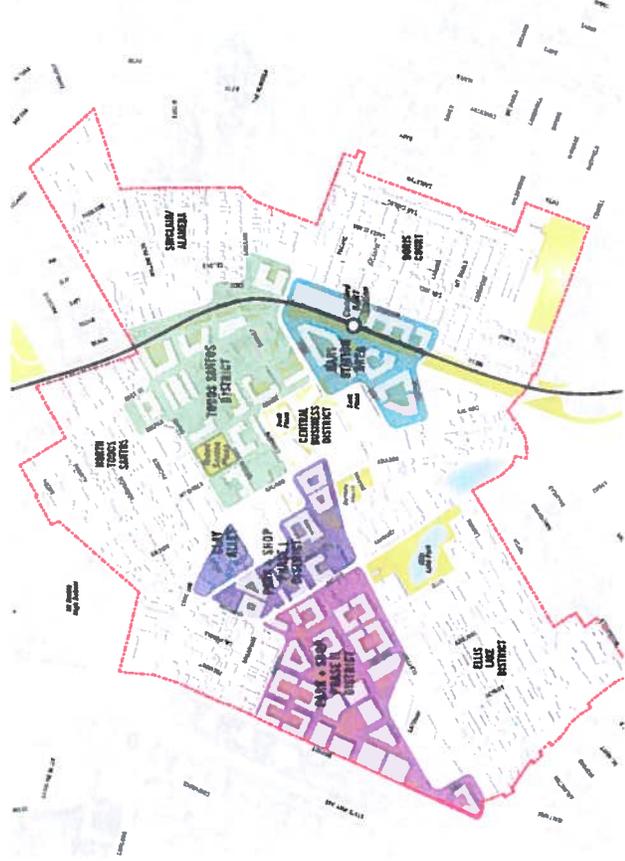


Fig 3.9 Specific Plan districts

DOWNTOWN CONCORD SPECIFIC PLAN

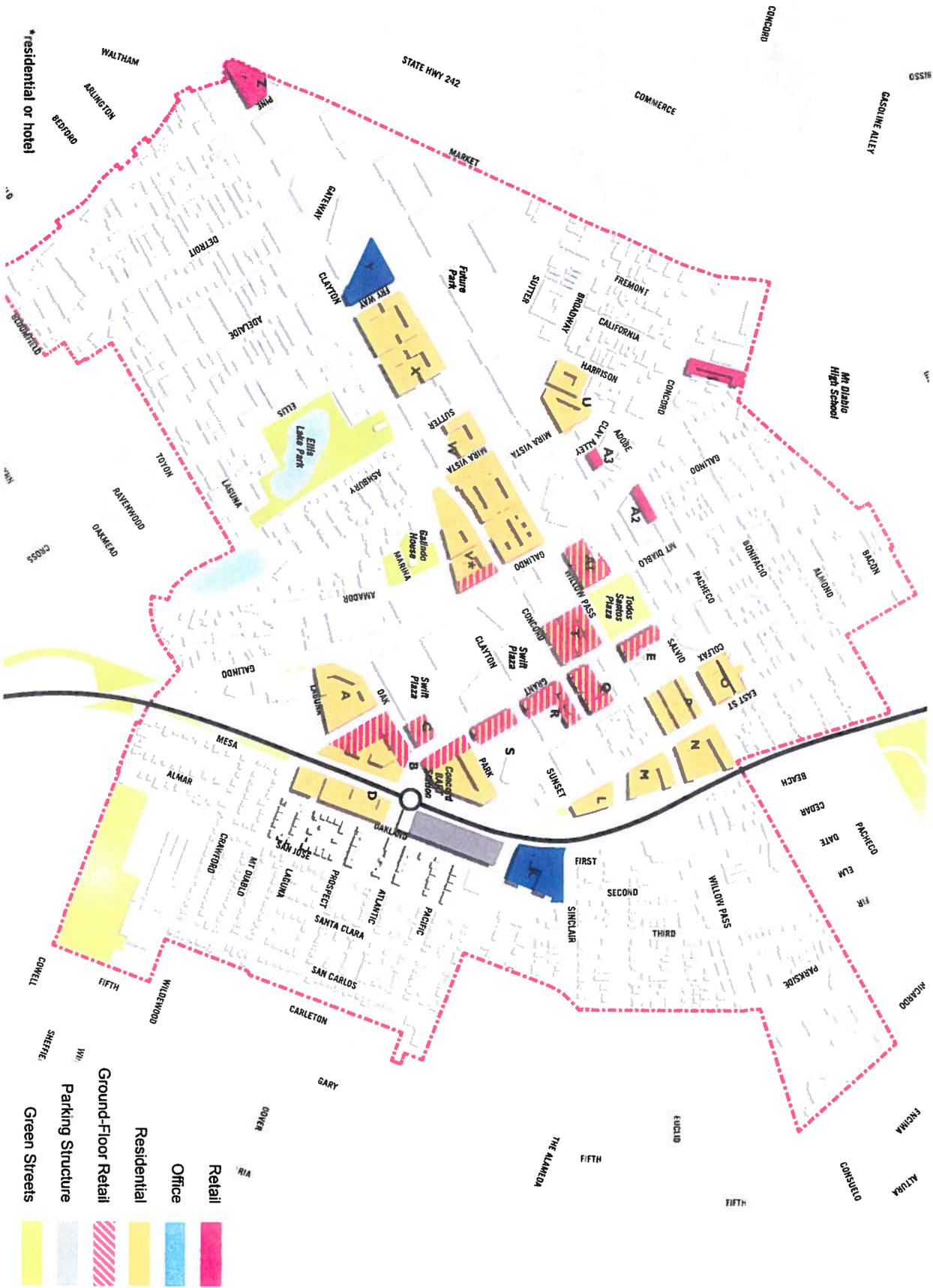


Fig 3.10 Specific Plan Phase I Land Use

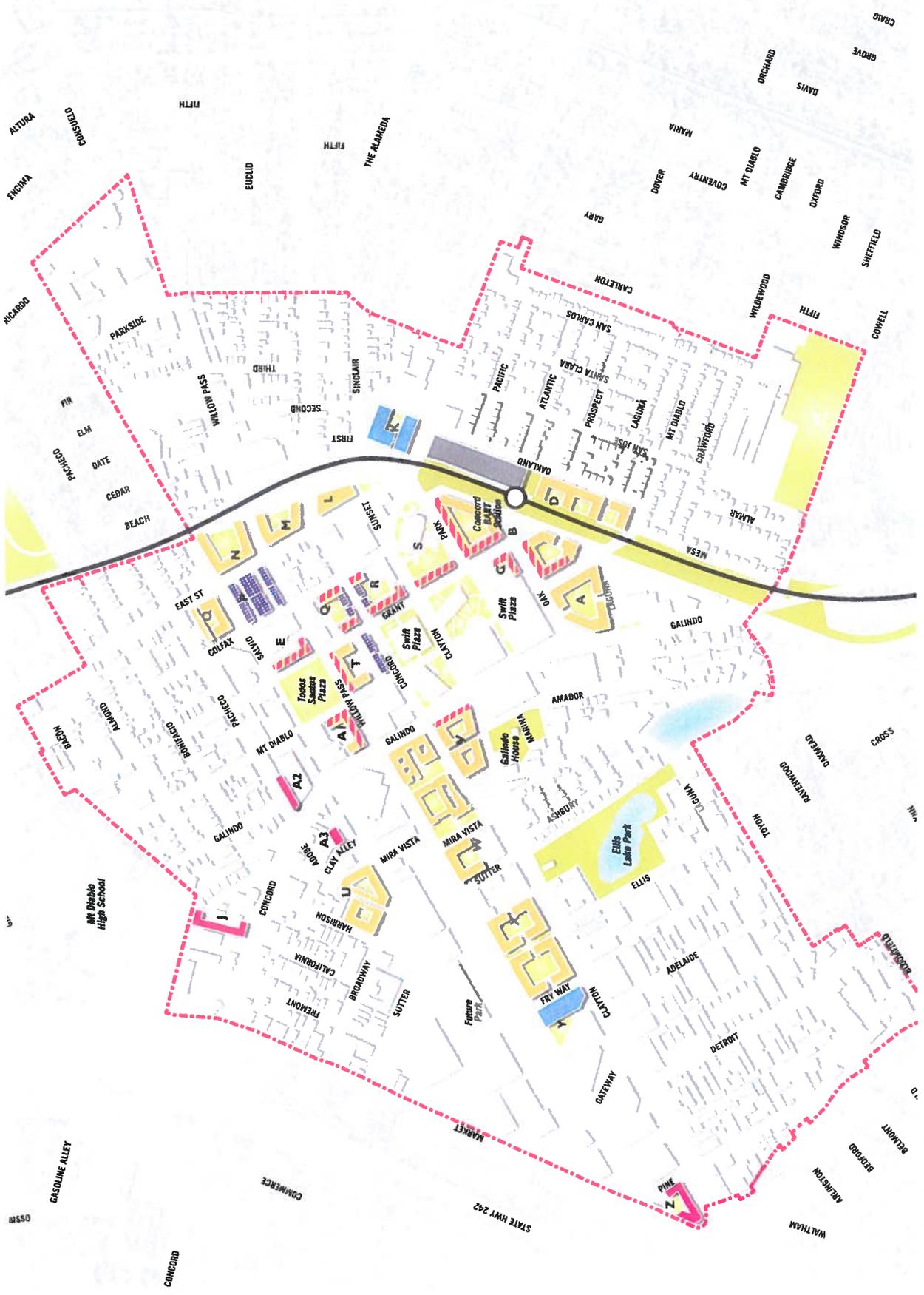


Fig. 3.11 Specific Plan Phase I Building Use

DOWNTOWN CONCORD SPECIFIC PLAN

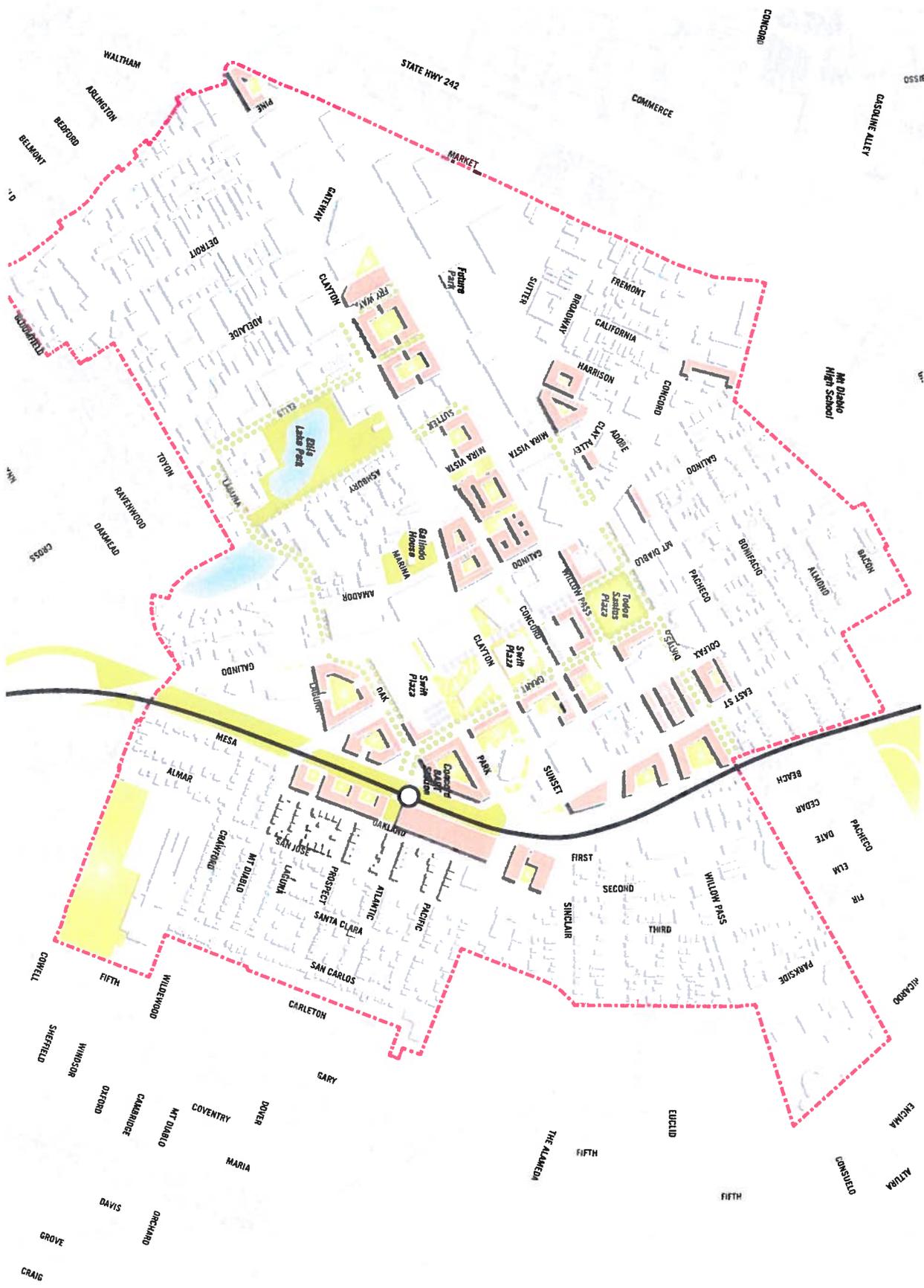


Fig. 3.12 Illustrative Plan - Phase I

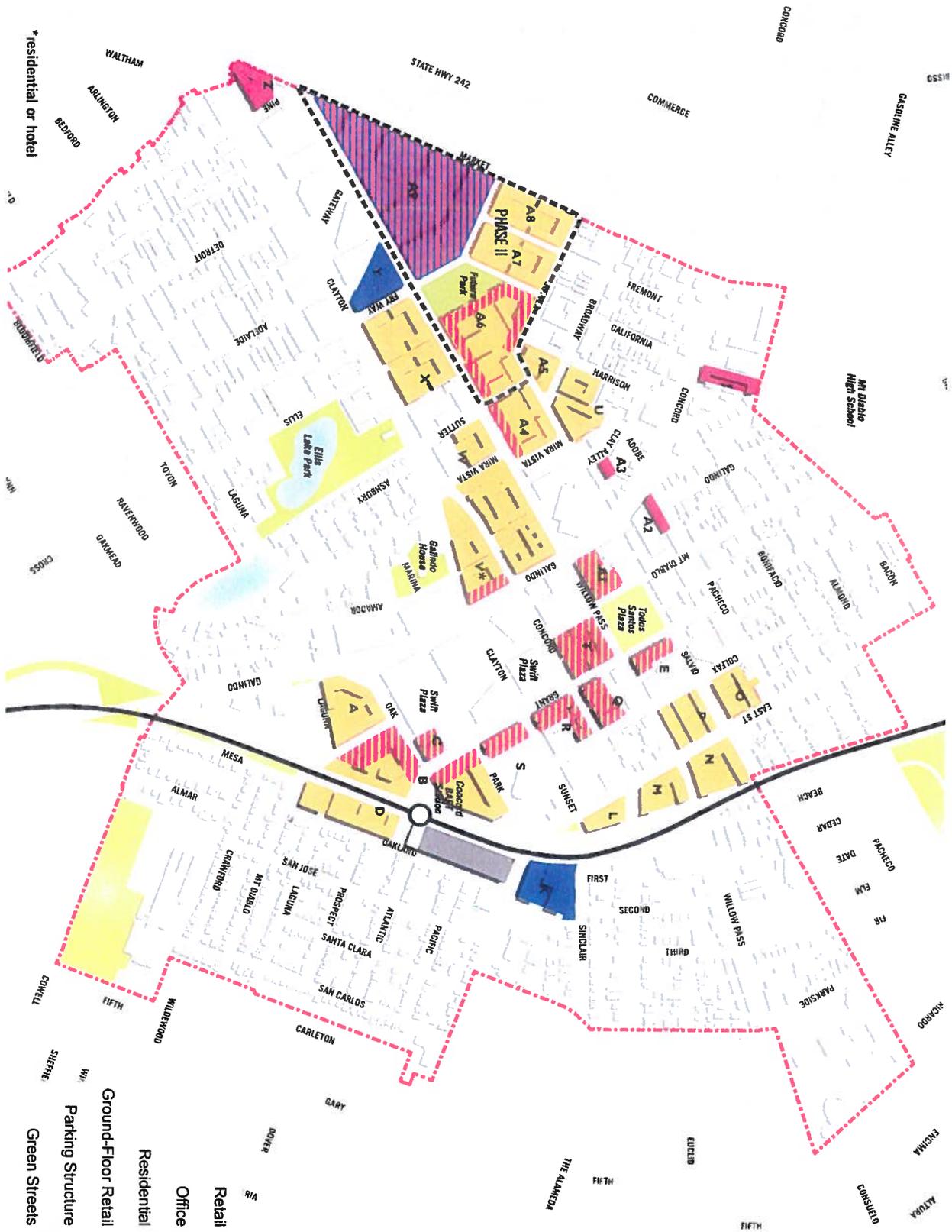
Table 3.4 Preferred Alternative New Development Program (Phase 1 - 2020 Projection)

		GFA	FAR		GFA	FAR	
Block A*	RESIDENTIAL	271,767	2	Block S	RETAIL	15,048	2.0
Block B	RESIDENTIAL	425,105	2.0		RESIDENTIAL	58,122	
	RETAIL	59,123		Block T	RESIDENTIAL	112,689	2.2
Block C	RESIDENTIAL	46,974	2.3		RETAIL	12,074	
	RETAIL	12,779			MIXED-USE (live-work)	75,600	
Block D	RESIDENTIAL	260,528	1.7	Block U	RESIDENTIAL	263,875	2.4
	PARKING STRUCTURE	319,488		Block V*	RESIDENTIAL/HOTEL	242,457	1.7
Block E	RESIDENTIAL	66,576	2.2		RETAIL	11,309	
	RETAIL	17,680		Block W	RESIDENTIAL	153,992	2.2
Block J	RETAIL	50,578	1.2	Block X	RESIDENTIAL	477,732	2.2
Block K	OFFICE	327,666	2.9	Block Y	OFFICE	258,738	3.3
Block L	RESIDENTIAL	119,284	3.1	Block Z	RETAIL	24,285	0.4
Block M	RESIDENTIAL	106,527	1.6	Block A1	RESIDENTIAL	95,354	2.2
Block N	RESIDENTIAL	143,316	1.4		RETAIL	20,880	
Block O	RESIDENTIAL	58,584	0.8	Block A2	RETAIL	12,490	1.0
Block P	MIXED-USE (live-work)	201,600	2.2	Block A3	RETAIL	7,269	1.0
Block Q	RESIDENTIAL	63,558	2.1	Housing Units			
	RETAIL	16,175		Apartments	Townhomes	Total	
	MIXED-USE (live-work)	25,200			Work-Live Lofts		
Block R	RESIDENTIAL	81,150	2.2	3,120 units	95 units	3,465 units	
	RETAIL	21,487			250 units	8,680 residents	
	MIXED-USE (live-work)	25,200				2,900 employees	

* These residential parcels may include compatible hospitality uses

Residential density 50du/acre - 1300du/acre (assuming average 1,000sf unit), based on average allowed Concord Development Code residential densities

DOWNTOWN CONCORD SPECIFIC PLAN



* residential or hotel

Fig 3. 13 Specific Plan Phase II Land Use

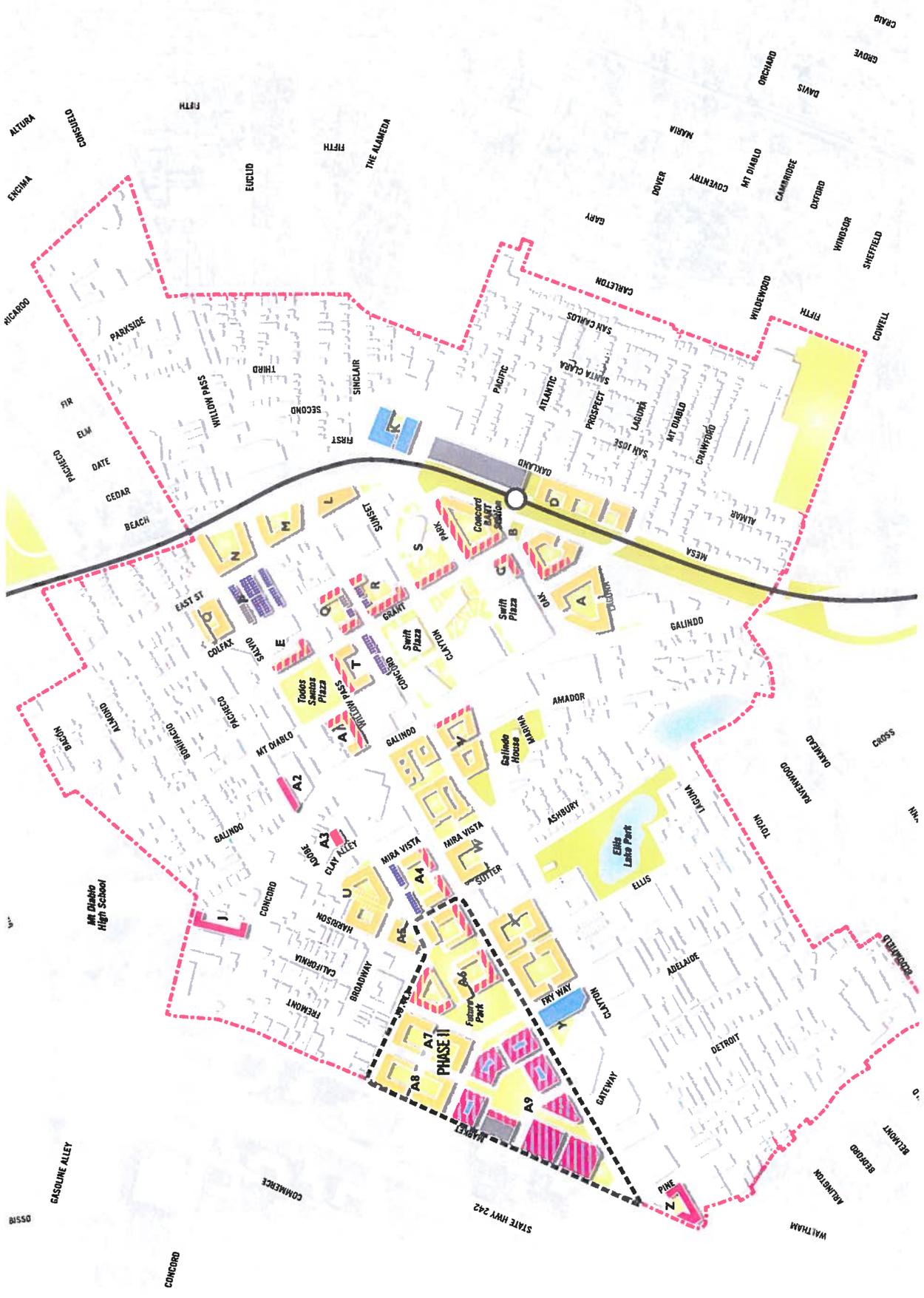


Fig. 3.14 Specific Plan Phase II Building Use

DOWNTOWN CONCORD SPECIFIC PLAN

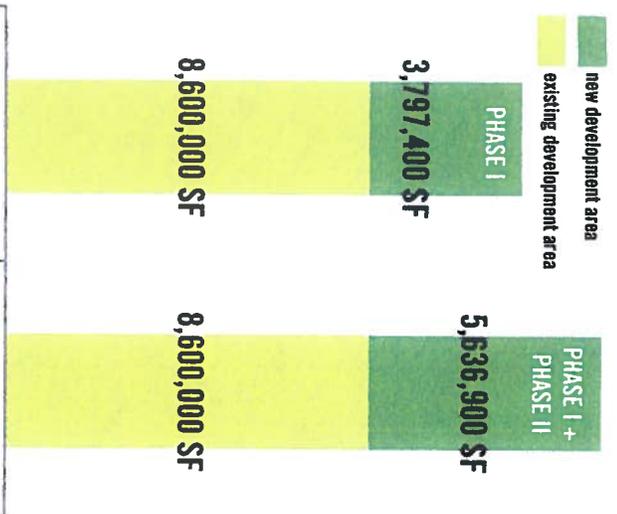
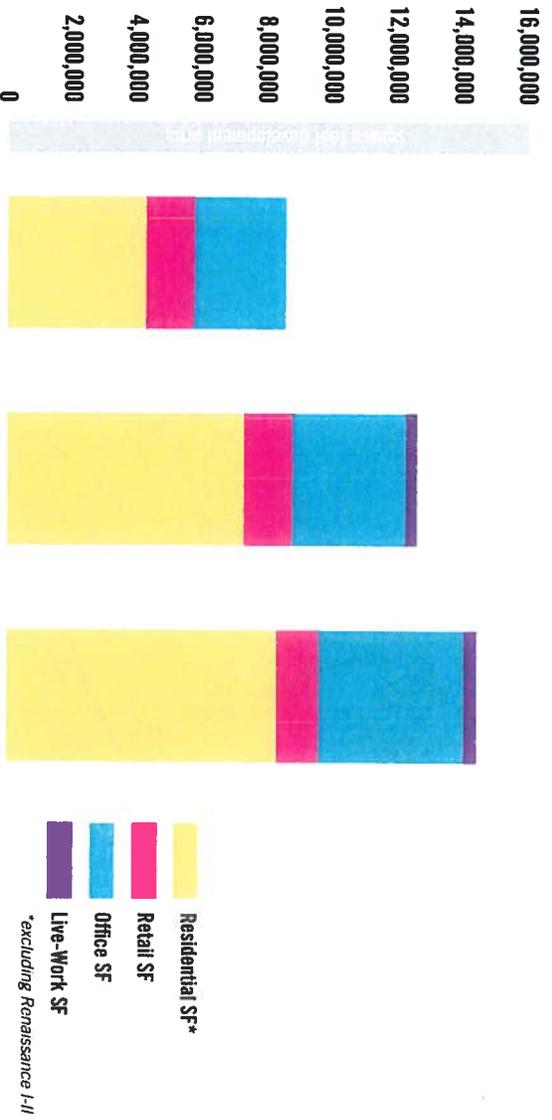
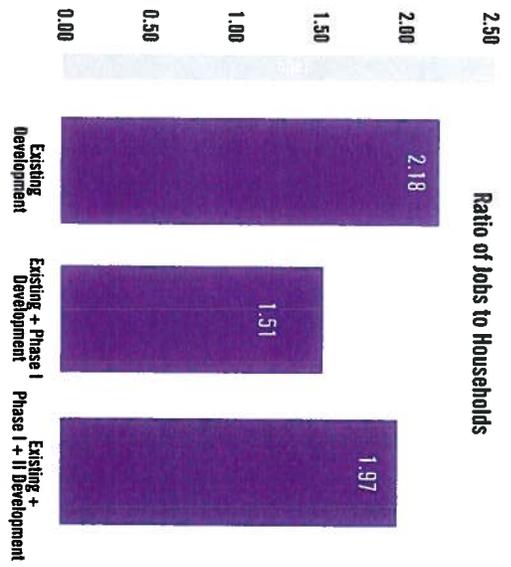
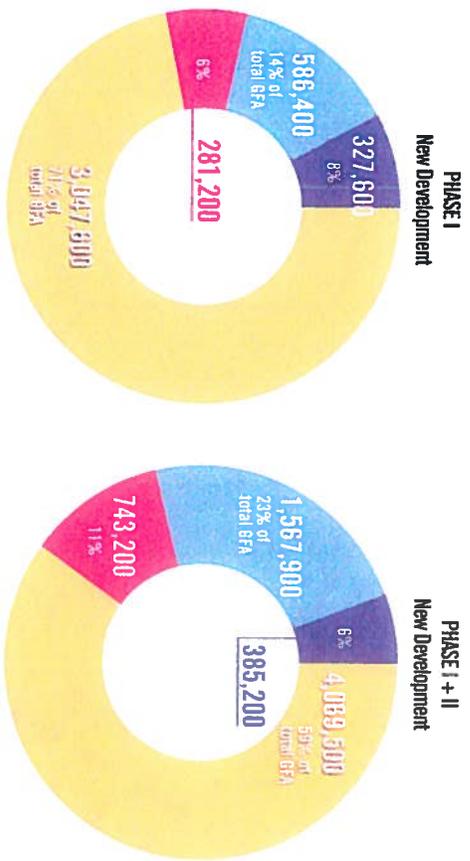


Fig 3.15 Specific Plan Development Area Charts

Table 3.5 Preferred Alternative New Development Program (Phase 2 - 2040 Projection)

		GFA	FAR		GFA	FAR
Block A*	RESIDENTIAL	271,767	2.0	Block U	RESIDENTIAL	263,875 2.4
Block B	RESIDENTIAL	425,105	2.0	Block V*	RESIDENTIAL/HOTEL	242,457 1.7
	RETAIL	59,123			RETAIL	11,309
Block C	RESIDENTIAL	46,974	2.3	Block W	RESIDENTIAL	153,992 2.2
	RETAIL	12,779		Block X	RESIDENTIAL	477,732 2.2
Block D	RESIDENTIAL	260,528	1.7	Block Y	OFFICE	258,738 3.3
	PARKING STRUCTURE	319,488		Block Z	RETAIL	24,285 0.4
Block E	RESIDENTIAL	66,576	2.2	Block A1	RESIDENTIAL	95,354 2.2
	RETAIL	17,680			RETAIL	20,880
Block J	RETAIL	50,578	1.2	Block A2	RETAIL	12,490 1.0
Block K	OFFICE	327,666	2.9	Block A3	RETAIL	7,269 1.0
Block L	RESIDENTIAL	119,284	3.1	Block A4	RESIDENTIAL	130,420 1.5
Block M	RESIDENTIAL	106,527	1.6		MIXED-USE (live-work)	57,600
Block N	RESIDENTIAL	143,316	1.4		RETAIL	16,011
Block O	RESIDENTIAL	58,584	0.8	Block A5	RESIDENTIAL	62,835 1.3
Block P	MIXED-USE (live-work)	201,600	2.2	Block A6	RESIDENTIAL	385,118 1.0
Block Q	RESIDENTIAL	63,558	2.1		RETAIL	58,377
	RETAIL	16,175		Block A7	RESIDENTIAL	191,904 1.3
	MIXED-USE (live-work)	25,200		Block A8	RESIDENTIAL	251,632 1.8
Block R	RESIDENTIAL	81,150	2.2	Block A9	OFFICE	981,478 3.8
	RETAIL	21,487			RETAIL	387,628
	MIXED-USE (live-work)	25,200			PARKING STRUCTURE	107,181
Block S	RETAIL	15,048	2.0	Housing Units		
	RESIDENTIAL	58,122		Apartments	Townhomes	Total
Block T	RESIDENTIAL	112,689	2.2	3,500 units	220 units	300 units
	RETAIL	12,074				4,020 units
	MIXED-USE (live-work)	75,600				10,100 residents

*These residential parcels may include compatible hospitality uses

Residential density 50du/acre - 130du/acre (assuming average 1,000sf unit), based on average allowed Concord Development Code residential densities

7,720 employees



Fig. 3.16 Illustrative Plan - Phase II

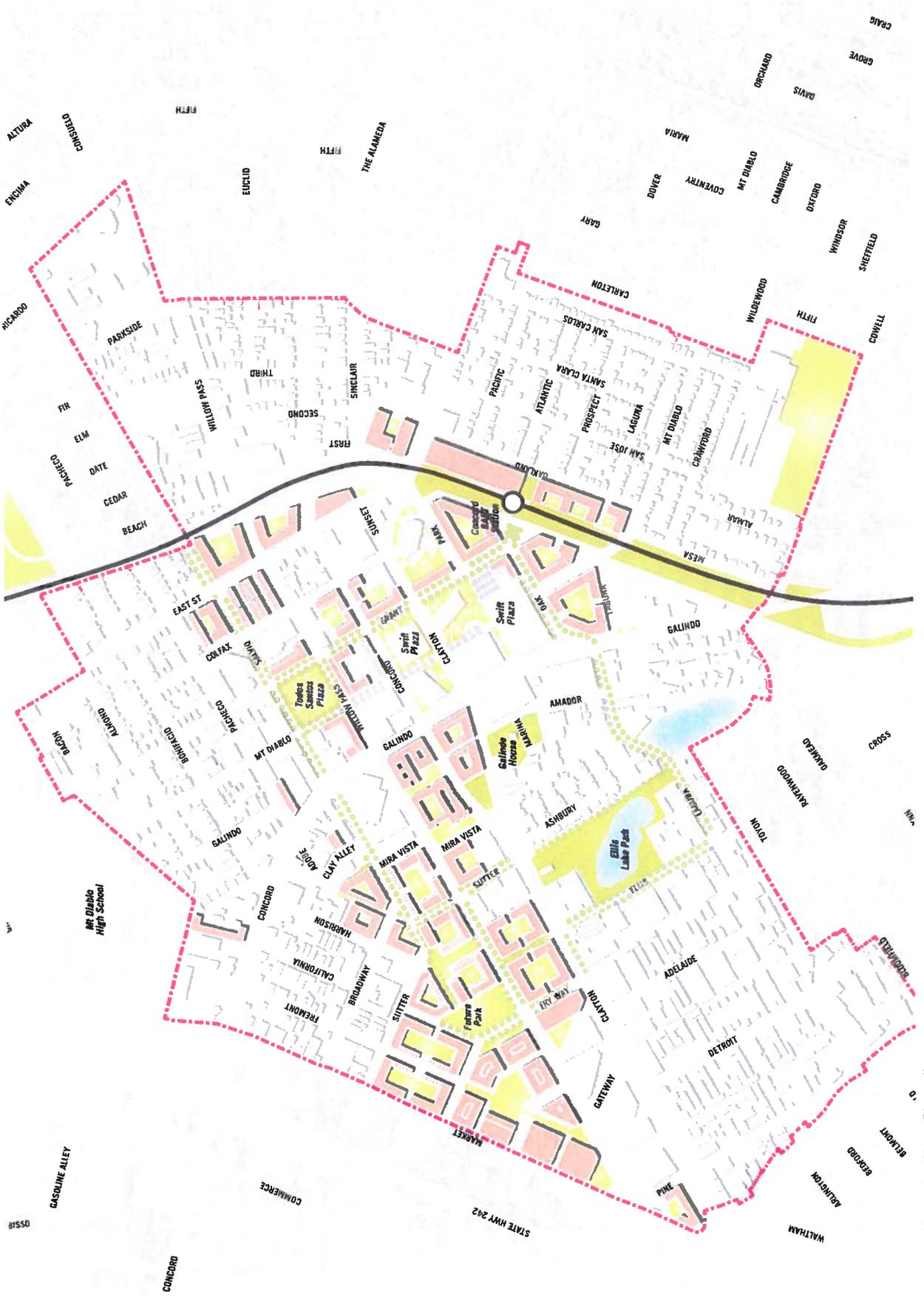


Fig. 3.17 Illustrative Plan - Phase II

3.5 ZONING

Land Use Intensity of Uses

In addition to the study of the current Zoning and the current land use, the project area has different zones that have varied intensity of use. This intensity is being defined in terms as a combination of density (number of units) as well as height (floors of buildings). The area northwest of the BART station and between Clayton/Willow Pass Roads has the highest intensity. These are primarily office and commercial uses.

A few blocks north of Todos Santo Plaza, areas north of the *Park and Shop* Shopping Center and the residential neighborhood in the Ellis Lake District are generally multi-family/higher density residential with interspersed commercial buildings.

The other portions of the project area, including the *Park and Shop* Shopping Center, North Todos Santos and the residential neighborhood that is southeast of the BART station are defined as low intensity use areas.

The basis of the land use proposals for the Downtown Specific Plan is set forth within the General Plan. The Zoning designations within the Downtown include the Downtown Pedestrian, Downtown Mixed Use, Medium Density Residential, High Density Residential, and Open Space districts. The project area contains many different zoning classifications and allowances. Figures 3.18 and 3.19 outline the existing and proposed Land Use and Zoning designations.

The proposed land uses are developed in accordance with the City of Concord General Plan (amended 2012) and 2012 Development Code. The Specific Plan recognizes that the higher allowable densities and FAR (ranging between 1.0 and 6.0) in the current code are sufficient to achieve the goals of the Specific Plan.

Users of this document are referred the City of Concord General Plan for detailed descriptions of the various Districts within the Project Area.

TRANSIT STATION OVERLAY

The City's Development Code includes a transit station overlay district for the Downtown BART Station. Incentives for additional density are provided within the area to encourage transit oriented development. This district is intended to create, preserve, and enhance the areas around the BART station by encouraging a concentrated mixture of increased residential density and commercial uses in a pedestrian oriented environment.

The development standards are intended to support transit use by ensuring access, creating a safe and pleasant pedestrian environment through promoting active uses such as shops and cafes and limiting conflicts between transit, vehicles, bicycles and pedestrians.

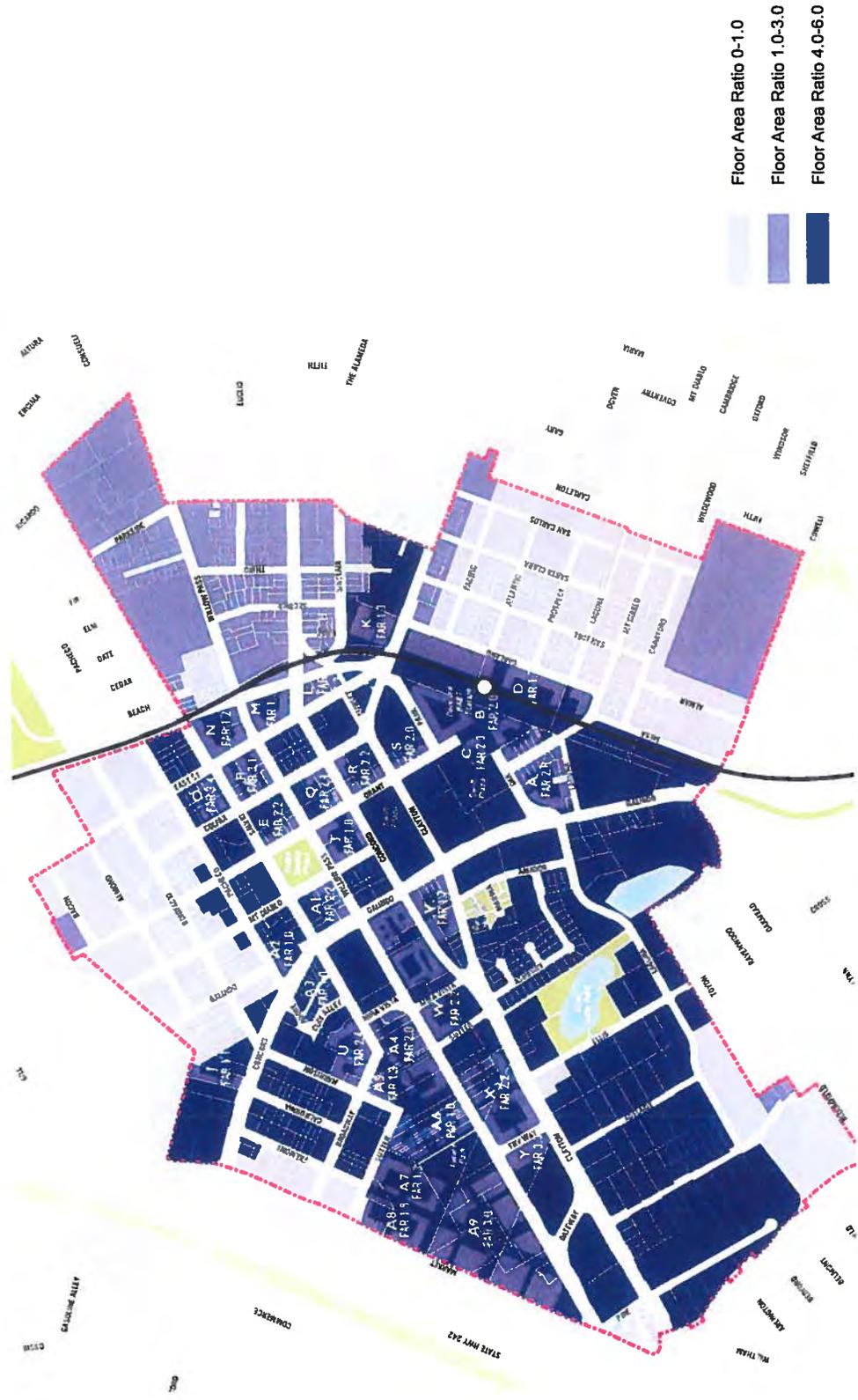


Fig. 3.18 Proposed Floor Area Ratio (FAR) by development blocks shown are within existing density allowances

DOWNTOWN CONCORD SPECIFIC PLAN

- RS6: Residential Single Family
- RS7: Residential Single Family
- RM: Residential Medium Density
- RH: Residential High Density
- CO: Community Office
- CMX: Commercial Mixed-Use
- SC: Service Commercial
- RC: Regional Commercial
- DP: Downtown Pedestrian
- NTS: North Todos Santos
- DMX: Downtown Mixed-Use
- PQP: Public/Quasi-Public
- OS: Open Space
- PR: Parks + Recreation

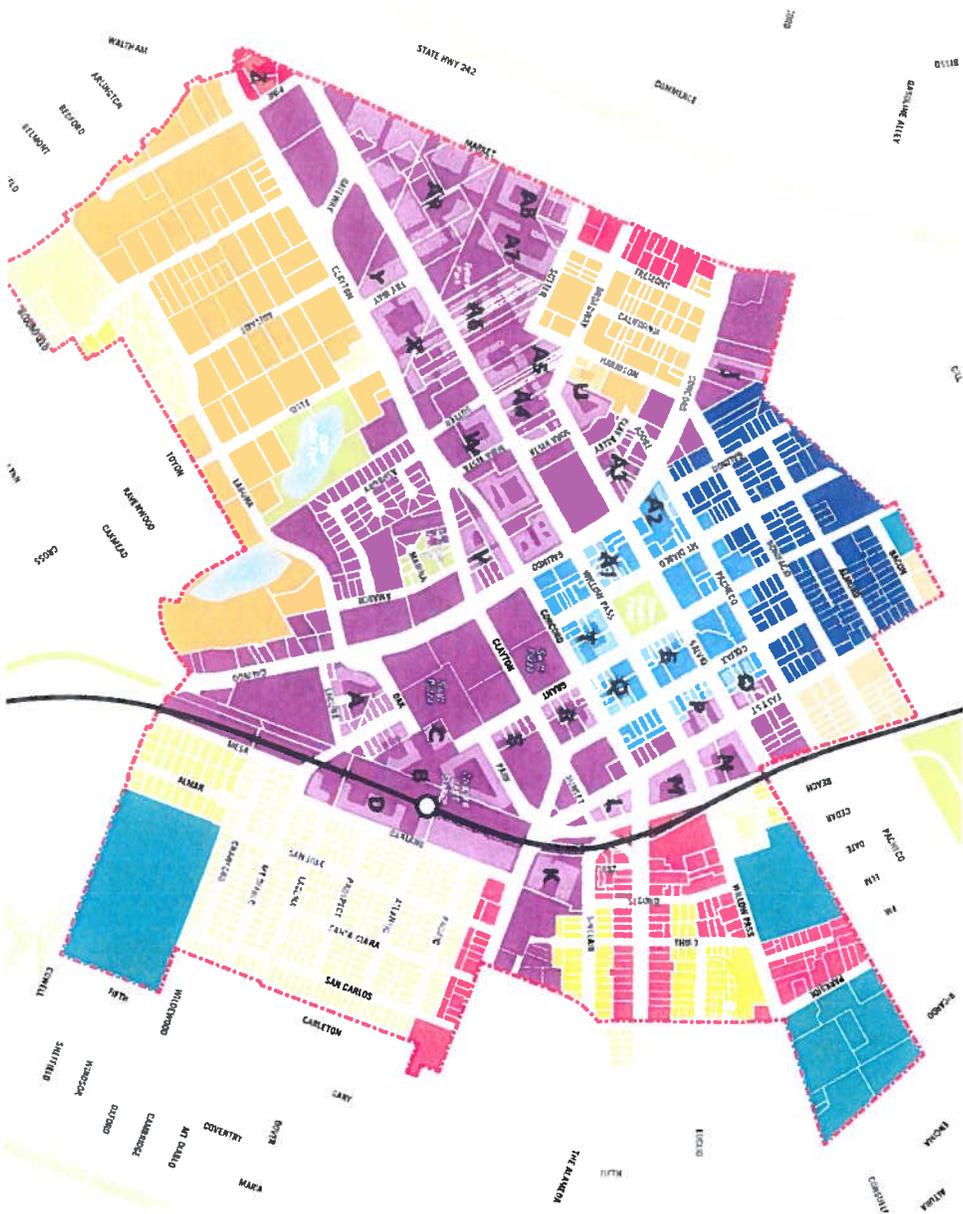


Figure 3.19 Development areas overlaid with existing zoning

3.6 PUBLIC SPACE AND STREETScape IMPROVEMENTS

GRANT STREET

Grant Street is an important connection between the BART Station Area and the downtown centered on Todos Santos Plaza. Currently the street lacks consistency in terms of the sidewalk widths, street trees, travel lanes and directions.

Given the central location of Grant Street and its station area connection, the street represents a major opportunity for revitalization efforts for new mixed-use development and street activity. This street will be considered an extension of the daily life of Todos Santos Plaza. New outdoor seating, street trees, lighting and other amenities will be provided to enhance the public life of the downtown.

The redesign of Grant Street is predicated upon providing a more consistent street width with two-way traffic, dedicated bike lanes, and wider sidewalks. New mixed-use development is proposed for both sides of Grant Street where opportunities exist.

Bulb-outs are proposed at major intersections crossing Grant Street to narrow pedestrian street crossings as well as to provide small places for sitting where opportunities exist. Potential gateway signage or markers will also be considered to improve wayfinding to and from the BART station and to more clearly identify entry into the downtown.

As part of the first implementation measures, parklets and other temporary programs such as food truck service should be considered as ways to promote street life on Grant Street until more significant investments in street improvements can be made.

DOWNTOWN CONCORD SPECIFIC PLAN

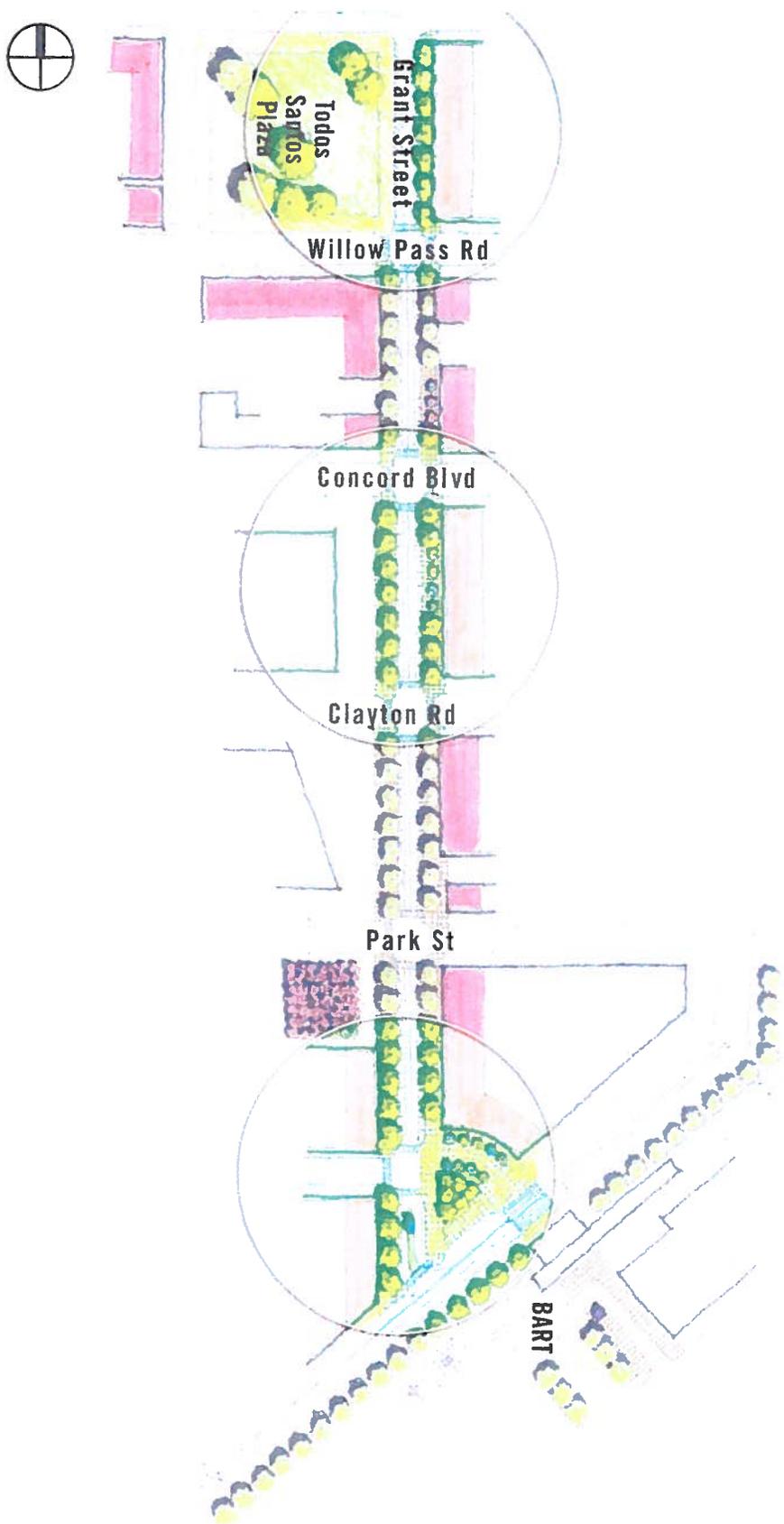


Fig. 3.20 Key nodes for streetscape improvements north to south along Grant Street

SALVIO STREET/CLAY ALLEY

Salvio Street is an important connection between the Park & Shop and the downtown centered around Todos Santos Plaza. Currently the street lacks consistency in terms of the sidewalk widths, street trees, and providing a real pedestrian oriented destination on the west side of the downtown near the Park & Shop.

Salvio Street was historically Concord's main street. It represents a major place for revitalization efforts for new mixed-use development and street activity. This street will be considered an extension of daily and vibrant life of Todos Santos Plaza. New outdoor seating, street trees, lighting and other amenities will be provided to enhance the public life of the downtown.

The redesign of Salvio Street is predicated upon centering development around the historic Pacheco Adobe, wider sidewalks, and utilizing the area along Clay Alley to create a different and smaller scale retail/outdoor dining environment. New mixed-use development is proposed for both sides of Salvio Street and around the Pacheco Adobe where opportunities exist.

As part of the first implementation measures, parklets and other temporary programs such as food truck service should be considered as ways to promote street life on Clay Alley until more significant investments in street improvements can be made.

WILLOW PASS ROAD

For the portion of Willow Pass Road that intersects the pedestrian priority zone, there are several strategies that could be employed. The most extensive scenario would turn that portion of the roadway into one lane in each direction. There is limited capacity on parallel and intersecting routes to accommodate the additional traffic, and it would likely cause poor operations at intersections on either end of the road *diet* as vehicle flow is metered into the area¹. This would allow for any number of improvements along the segment such as widening of the sidewalks, providing on-street parking, a wider median, curb extensions, and other enhancements.

To maintain two lanes in each direction, another option would be to exempt the intersections within the pedestrian priority area from vehicle level of service benchmarks. This would permit increased pedestrian crossing times. Other potential treatments include raised crosswalks and signal timing changes that limit the speed of traffic on the roadway.

Given the small block size in the area, mid-block crossings are not recommended, however, eliminating and/or consolidating driveways from portions of Willow Pass Road as parcels would improve the flow of traffic. This strategy could have the undesired effect of increasing speeds, but would decrease vehicle/pedestrian conflicts at those locations.



Wayfinding examples

¹ A road diet refers to eliminating a traffic lane or reducing the width of lanes.

DOWNTOWN CONCORD SPECIFIC PLAN

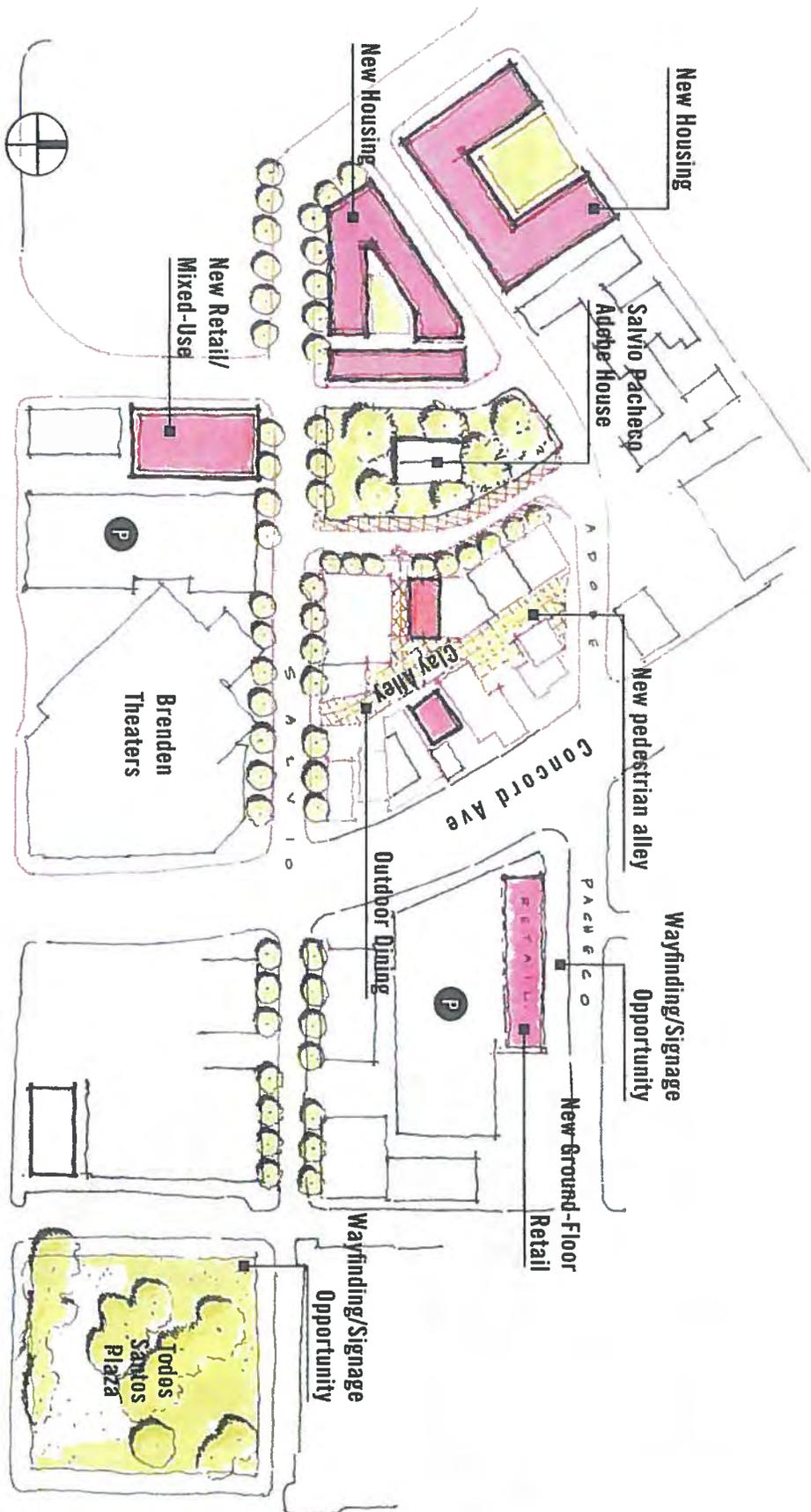


Fig. 3.21 Pacheco Street and Clay Alley new elements and streetscape improvements

OPEN SPACE/BIKE PATH ALONG BART TRACKS

The BART tracks cut through the entire Specific Plan area. One key open space proposal is to connect the existing open space/sidewalks that exist from the North Concord BART station along the Port Chicago Highway all the way to the Downtown BART Station as a linear greenway, much like similar trails in the Bay Area such as the Ohlone Greenway in Berkeley/EI Cerrito.

Developing such a greenway would allow for more pedestrians/bicyclists to access BART in that it provides a more direct access route to the station. Almost all of the properties that are currently in the track's right of way are either vacant, underutilized, or exist as parking lots, making this proposal very suitable for early implementation.

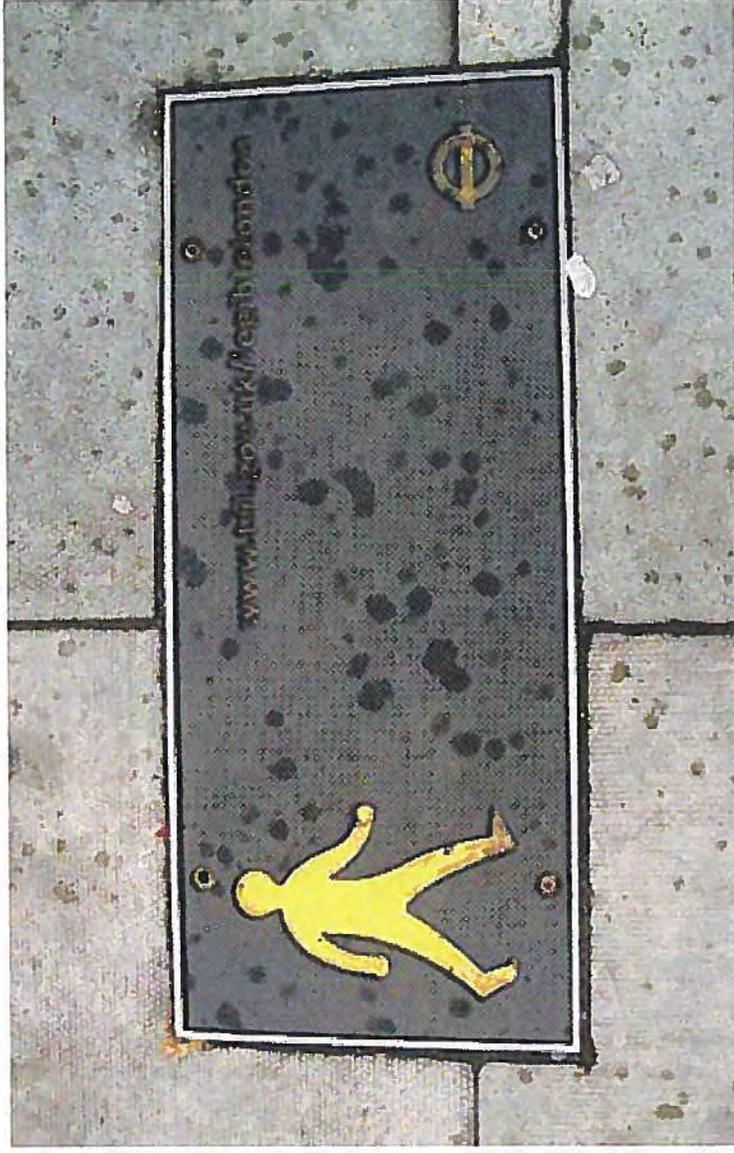
SHORT TERM PUBLIC REALM INTERVENTIONS

Recognizing that streetscape and public realm improvements are costly, short term temporary strategies should be incorporated, such as Parklets, food truck alleys, and temporary paint for bike lanes. The small and underutilized parking lots in the Downtown could also be locations for pop-up style urban interventions such as small concerts, food venues, and small retail carts to provide an atmosphere much like the larger Farmer's Market that current exists at the Plaza. These strategies could be employed in key areas of the Downtown to help the City assess viability for future and more permanent public realm improvements.

WAYFINDING

Implementation of new signage as part of a comprehensive wayfinding system is recommended to direct pedestrians and bicyclists within Downtown Concord. Identifiable and well-designed signage indicating the greenway loop, as well as directions to and from key locations will assist visitors and residents alike.

Directional information and wayfinding features should be established at the BART station, directing foot traffic to the historic Downtown and Todos Santos Plaza along Grant Street. Other key destinations that would benefit from wayfinding features include historic landmarks, new Salvio Street and Clay Alley retail, Ellis Lake, and the continued greenway extension along the BART rail line.



Pedestrian wayfinding system integrated into paving

DOWNTOWN CONCORD SPECIFIC PLAN





Conceptual rendering of potential future Downtown Concord, looking north up Grant Street towards Todos Santos Plaza



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3.7 ECONOMIC VITALITY

An economically vital Downtown is a place where sufficient jobs, products, and services support the community on a sustained basis. Favorable economic conditions are realized in places when human preferences for environments that include desirable activities, safety, attractive open spaces, and high-quality food are realized. The provision of attractive places for employers, residents, and visitors can catalyze a Downtown with plentiful jobs, products and services to serve a community as diverse as Concord. The private sector contributes to creating an attractive environment for all of Downtown's users by developing and operating private spaces in response to demands and consistent with City development and design codes. The public sector has a major role to play in creating, improving and maintaining an attractive Downtown with welcoming and safe public gathering and recreation spaces, functioning transportation facilities responding to different transit modes, coordinated planning, catalyst/ demonstration projects on public land, and responsive public services. The Specific Plan addresses both the private and public roles improving the Downtown's vitality.

Consistent with the City's commitment to maintaining a strong and vibrant economy, the Specific Plan complements many of the strategies defined in the City's Economic Vitality Strategy Update (2010) and the City's General Plan (Economic Vitality chapter).

CONFORMANCE TO GENERAL PLAN GOALS AND POLICIES

The following is a summary of how the proposed Land Uses and Economic Development policies address the major City of Concord General Plan Goals and Policies for the Downtown.

Goal ED: A Vibrant City Center

The economic development program and implementation policies in the Specific Plan are designed to promote the Downtown as the primary social, cultural, and entertainment center of the community. Concord's downtown plays a vital role in the City's economy and provides a niche setting for restaurants, specialty shops, small businesses, and entertainment venues. The economic policies are designed to sustain the Downtown as the commercial center and will ensure that sufficient developable commercial space is provided to meet and exceed projected job growth. Growth in employment uses and households to locations in close proximity to the BART station that encourages multi-modal trips and additional pedestrian traffic, is a vital requirement for successful retail and other uses.

The Plan proposes a number of key urban design features and supports a strong mix of uses that will support an urban, pedestrian oriented environment that builds upon the proximity of Todos Santos Plaza and the BART Station.

Goal ED: Retail Strength

The Plan proposes implementation strategies to help foster investment in the retail sector by identifying strong potential areas for retail centers/ ground floor retail and emphasizing pedestrian amenities. The Plan encourages a mix of retail, boutique, local and regional commercial uses that draws a variety of customers from both the City and the larger Bay Area.

DOWNTOWN CONCORD SPECIFIC PLAN

ECONOMIC MARKET DEMAND AND FEASIBILITY ANALYSIS

While the proposed land use program accommodates growth projected for the Downtown, new development actually occurring is dependent upon the economic returns developers may achieve through new construction. To analyze the financial feasibility of the various types of uses and building types, prototypical proformas have been developed for:

- **Low-rise residential.** 1-4 stories of residential building space wrapped around a parking structure or next to a parking structure, or with tuck under parking such as townhomes or live-work lofts.
- **Mid-rise residential.** 4-5 stories of residential building space on top of a podium parking structure.
- **Mid-rise office.** 4-5 stories of office building space on top of a podium parking structure.

High-rise structures (up to 20 stories) were also analyzed but did not meet initial feasibility tests. Podium parking associated with mid-rise construction is preferred to separate parking structures for a number of reasons, including greater land efficiencies, lower construction costs, as well as the creation of a higher-quality pedestrian environment and streetwall aesthetic, as podium parking can be located behind active building facades.

Note that ground floor retail space, which was envisioned in the Alternatives Phase as potential uses at selected locations, is not directly analyzed on a building by building basis for financial feasibility because this space has only a small impact on the overall economics of the project.

Financial proformas for the prototypes are included in this Plan's Appendix Tables and include basic inputs like:

- Current market rents
- Per square foot direct building costs and per parking space construction costs
- Operating costs and losses
- Capitalization rate

These basic metrics are combined to estimate the amount that a developer could pay to purchase land, which is known as the residual land value of a development. If the value is in the range of the market price of developable land, then the development may be financially feasible.

The results of the financial feasibility proforma analysis indicate that low- and mid-rise residential development returns a positive land value, but only low-rise residential development returns a land value sufficiently high to motivate a seller to dispose of their property under current market conditions (see Tables 6.1 – 6.4).

Market improvements such as these provide sufficient returns in the mid-rise apartment development category to justify construction while mid- and high-rise office development types are currently challenging.

Office development, based on current or improved market rents, is not financially feasible under current or the improved market conditions tested. However, new office development in the past in downtown Concord has been driven by the build-to-suit market. Build-to-suit developments occur when a company selects a location and retains a developer to build space for its use. In this case, developers are not relying on general market rents justifying construction cost.

RETAIL DEMAND GENERATED

Demand for retail square footage is generated by purchases by residents, workers, and visitors. To analyze the various levels of retail proposed in the options, the spending power of new residents and workers is estimated and compared with various levels of spending "capture" by new Downtown retail outlets. While demand is generated by spending made by new residents and workers, where that demand may be met (e.g., in the Downtown, in other existing retail locations, or outside of the City) is not analyzed. The intent of this analysis is to assess whether the amount of retail potential included in each alternative could reasonably be supported by the expenditures of new residents and workers.

New spending by new residents in the Plan will result in higher demand (80,000 to 115,000 square feet). Note that these estimates will vary based on a number of factors including:

- The ability and attractiveness of existing retail locations to capture spending from new residents and employees may decrease the demand for new space.
- Conversely, to the extent that a strong new retail cluster is established within newly developed buildings, sales that are today going to existing retail establishments may shift over to new locations, which would increase demand for new space.
- Spending shifts of current residents and employees who may be making expenditures outside of the Downtown may shift that spending to new Downtown retail with new offerings, which would increase the demand for space.
- The availability of sites suitable and attractive to new retailers, including parking, visibility, and proximity to complementary and similar uses.

DOWNTOWN CONCORD SPECIFIC PLAN

FORECASTS

Jobs

Projections for growth in the Downtown area are generally consistent with one another and with the Specific Plan proposal. Figure 3.23 illustrates the existing number of jobs in the Downtown along with several projections, including:

OneBayArea. Reflects the Plan Bay Area estimate for downtown Concord by 2040.

Back to 2000. Equals the number of jobs in the Downtown during the booming economy in 2000.

1990-2000 Growth. Estimated by applying the annual growth in jobs from 1990 to 2000 for the 30 year projection period (2010-2040).

Maintain Percentage of County. Multiplies overall jobs projection for Contra Costa County through 2040 with Downtown's current percentage of all County jobs.

As shown, all projections show an increase of about 3,000 to 5,000 jobs in the next 25 years.

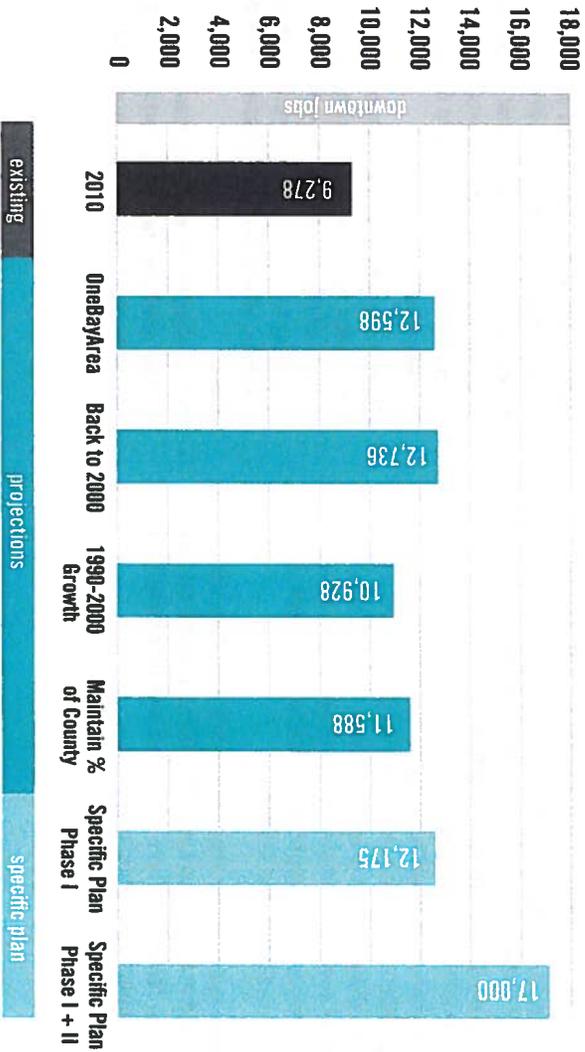


Fig 3.23 Downtown Jobs: Existing, Projections, and Specific Plan Program

Housing Units

Projections for growth in the Downtown area are generally consistent with one another and with the Specific Plan proposal. Figure 3.24 illustrates the existing number of households in the Downtown along with several projections, including:

OneBayArea. Reflects the Plan Bay Area estimate for downtown Concord by 2040.

1990-2000 Growth. Estimated by applying the annual growth in residents from 2000 to 2010 in the Downtown to the 30 year projection period (2010-2040).

Maintain Percentage of County. Multiplies overall residential projection for Contra Costa County through 2040 with Downtown's current percentage of all County residents.

Projections vary from housing unit increases of between 600 and 4,000 units. Both of the lower end projections are based on the recent past level of development in the Downtown while the OneBayArea presents a "normative" future of more opportunities for housing near transit. The Specific Plan has planned to accommodate this higher end projection of housing for a variety of reasons, including: more housing Downtown will support a more lively environment and more retail and entertainment, different housing types in an urban Downtown will provide more housing choices than the City current offers, and, since the Great Recession, transit-oriented development has proven a strong market for new homeowners and renters.

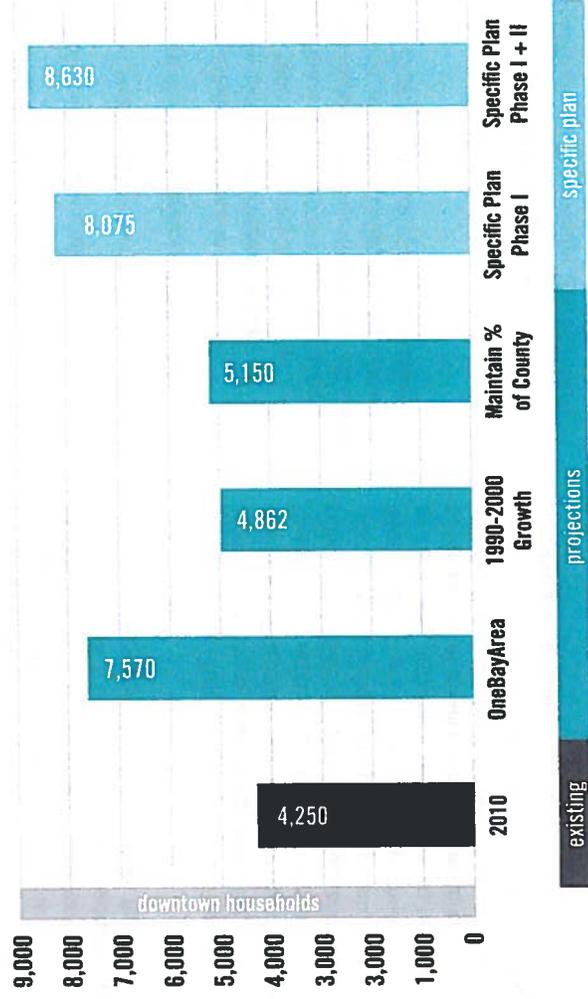


Fig 3.24 Downtown Housing: Existing, Projections, and Specific Plan Program

DOWNTOWN CONCORD SPECIFIC PLAN

3.8 SUSTAINABILITY

The Downtown Concord Study recommends establishing the following four goals governing future sustainability within the study area relating to site utility infrastructure:

1. Reduction of potable water demand
2. Reduction of flow to sewer mains
3. Reduction of flow to storm mains
4. Improvement of water quality in storm mains

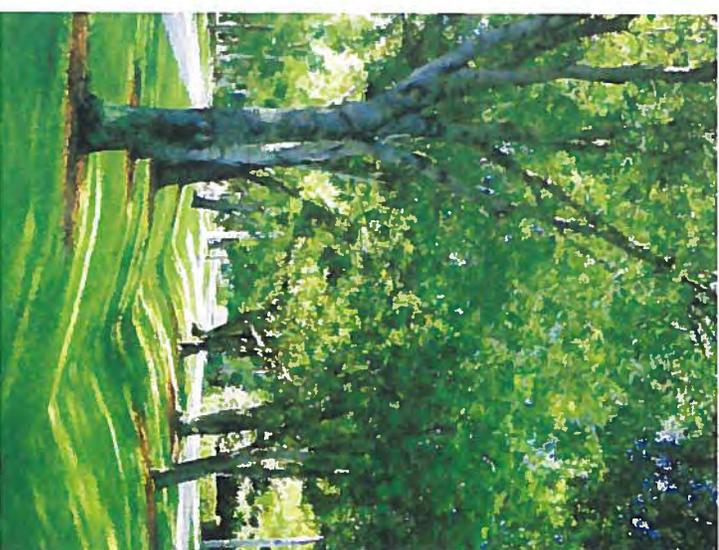
Policy implementation directed at achieving these goals will extend the lifespan of existing infrastructure, reduce public costs, and help mitigate negative environmental impacts. Existing statewide and regional policies already in place and relevant to these objectives could also be utilized by the City of Concord to meet the sustainability goals.

Existing policies include:

- 20x2020 Water Conservation Plan
- Municipal Regional Stormwater Permit (MRP), Order No. R2-2009-0074
- Construction General Permit Order 2009-2009-DWQ
- California Green Building (CAL Green) Building Code

The 20x2020 Water Conservation Plan is a state-level plan that requires a 20% reduction in per capita water use statewide by 2020. This plan requires achievement and verification from the local water-providing agencies within the state. The Contra Costa Water District (CCWD) is already working towards achievement. This plan is relevant to Study goals 1 and 2 above, as a reduction in water demand also translates to less flow in the sewer mains.

The Municipal Regional Stormwater Permit, or MRP, is the storm water policy established for the entire San Francisco region. Local municipalities however are responsible for enforcement of the policy. The MRP is a plan aimed at addressing both storm water quantity and quality, which relate to the Study goals 3 and 4 above. Known more familiarly as "C.3," the document sets minimum requirements for storm water quality and quantity thresholds and provides methods for long-term post-construction treatment of stormwater runoff for new development and redevelopment.



Green street

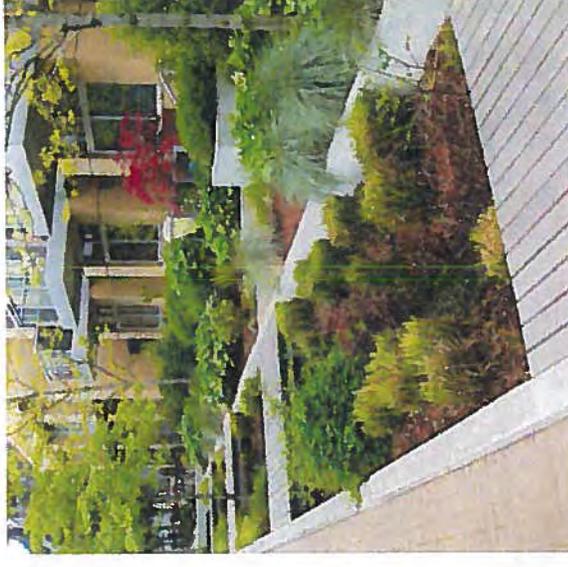
The Construction General Permit is a state-level permit program that addresses national water quality requirements set by the National Pollutant Discharge Elimination System (NPDES) for stormwater runoff from construction sites. Implementation of the Permit is at the state level with some local assistance for enforcement. The Permit is relevant to Study goal #4 primarily in the short term, as it primarily governs over construction practices.

The CAL Green Building Code is a set of codes setting a minimum level of efficient and sustainable building and construction practices. This code is implemented at the state level with local assistance for enforcement. The basic, mandatory level, and Tier 1 pre-requisite items pertaining to water and stormwater will be met by any project following the above three policies (20x2020, the MRP, and the Construction General Permit).

Additional policies that could be established by the City of Concord could include some or all the following:

- LEED Certification at a specific level
- CAL Green Certification beyond Tier 1, or requirement of inclusion of specific credits
- City developed credits similar to but separate from LEED or CAL Green certification

While requirement of a certain level of LEED or CAL Green certification would be a benefit to sustainability goals in general, the vast number of optional credits available means that a project could attain certification but not work towards achieving the four recommended Study infrastructure goals. Beyond certification, the City could also require the inclusion of specific credits to insure that the sustainability goals are being addressed with the certification.



Stormwater management



Ellis Lake Park

Under the LEED program, Water Efficiency (WE) credits 1, 2 and 3 would all apply towards achievement of Study goals 1 and 2 above.

They include policies affecting Water Efficient Landscaping, Innovative Wastewater Technologies, and Water Use Reduction, respectively. Each credit provides different options to meet the credit that the City could either dictate as policy or leave up to the developer to determine the most appropriate way to achieve for their project. WE 3 goes beyond the 20% reduction already required by the 20x2020 Plan with an option of 30%, 35%, or 45% reduction. The LEED credit for Sustainable Sites (SS) 6.1, Stormwater Design—Quantity Control, addresses long-term reduction of stormwater flow off site, which is recommended Study goal number 3. The LEED credit for stormwater quality control, SS 6.2, is no more stringent than the goals already required by the MRP and therefore will be met as a standard requirement to development in the San Francisco Bay region.

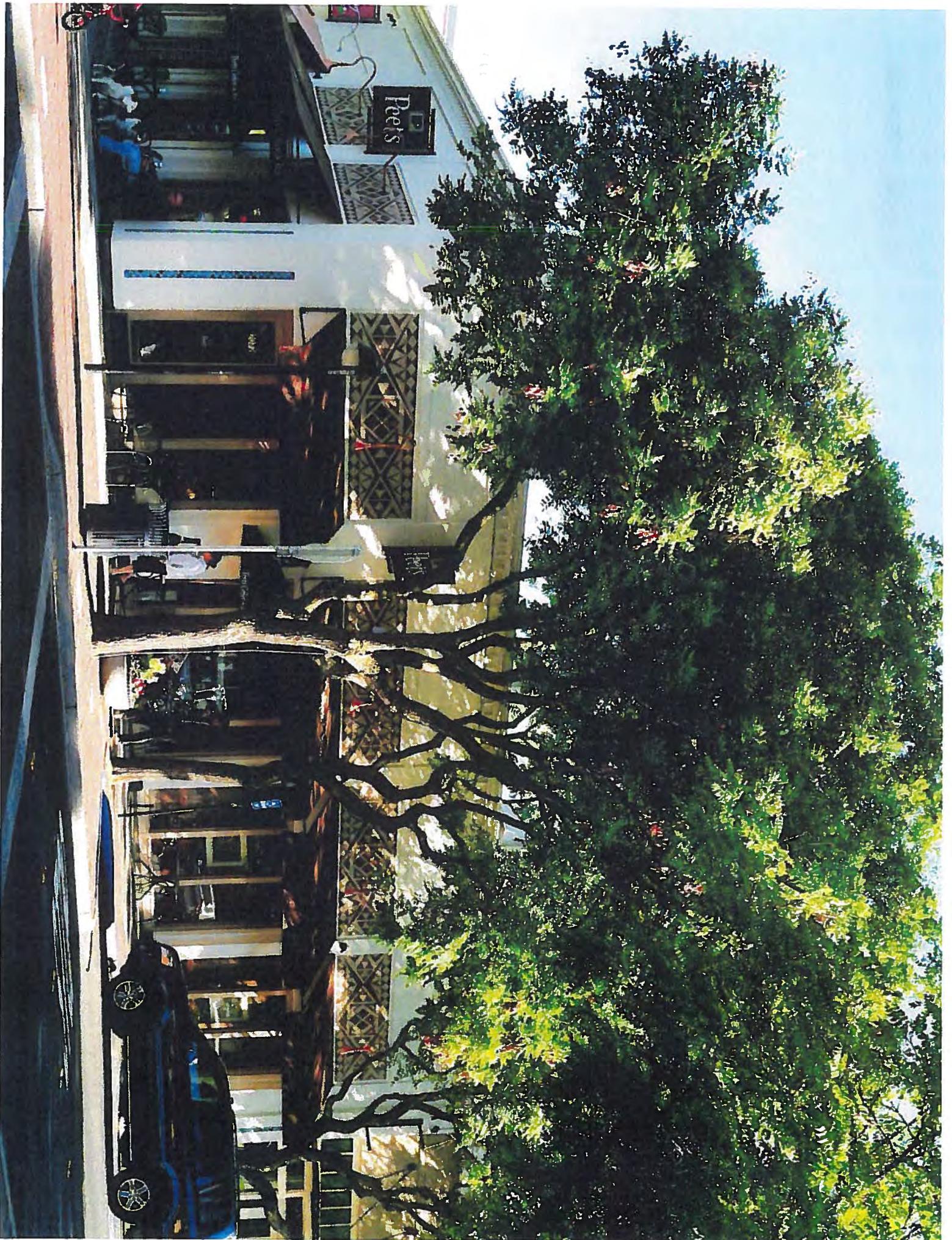
Similar to LEED, the City could choose specific CAL Green points to be included in achievement of Tier 1 certification or higher that would be relevant to reducing impacts to public infrastructure and the environment.

In conjunction with or as an alternative to LEED or CAL Green, the City could also implement their own, similar sustainability standards that would apply to various types of new construction. Additional policies could include provisions to require impact fees or conditioned construction that would go towards City-wide sustainability improvements, such as the expansion of the recycled water program already begun by CCWD, Central Contra Costa Sanitary District (CCCSD) and the Delta Diablo Sanitation District (DDSD).

In establishing these sustainability policies, the City would also need to determine what type and size of project would trigger implementation of the supplemental sustainability requirements. Minimum thresholds could be established to dictate which projects would be required to meet the goals, such as a project's square footage, cost of construction, construction type, or FAR.



LEED plaque



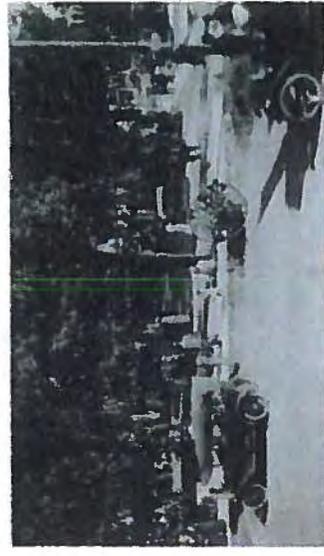
04 Design Guidelines

4.1 GENERAL INTENT

The general intent of this section is to provide a set of building development design guidelines to provide guidance to potential property owners, developers, and the City's design review/staff for determining the architectural character and building development for proposed projects. As the current City of Concord's Development Code has specific standards for height and FAR, as well as setback regulations, this chapter focuses on building character, how buildings should relate to the public realm, and address parking and servicing to ensure the strong pedestrian character of the Downtown and area around Todos Santos Plaza is maintained.



Salvio Street, 1930's



Todos Santos Plaza, 1915

4.2 URBAN FORM, MASSING AND CHARACTER

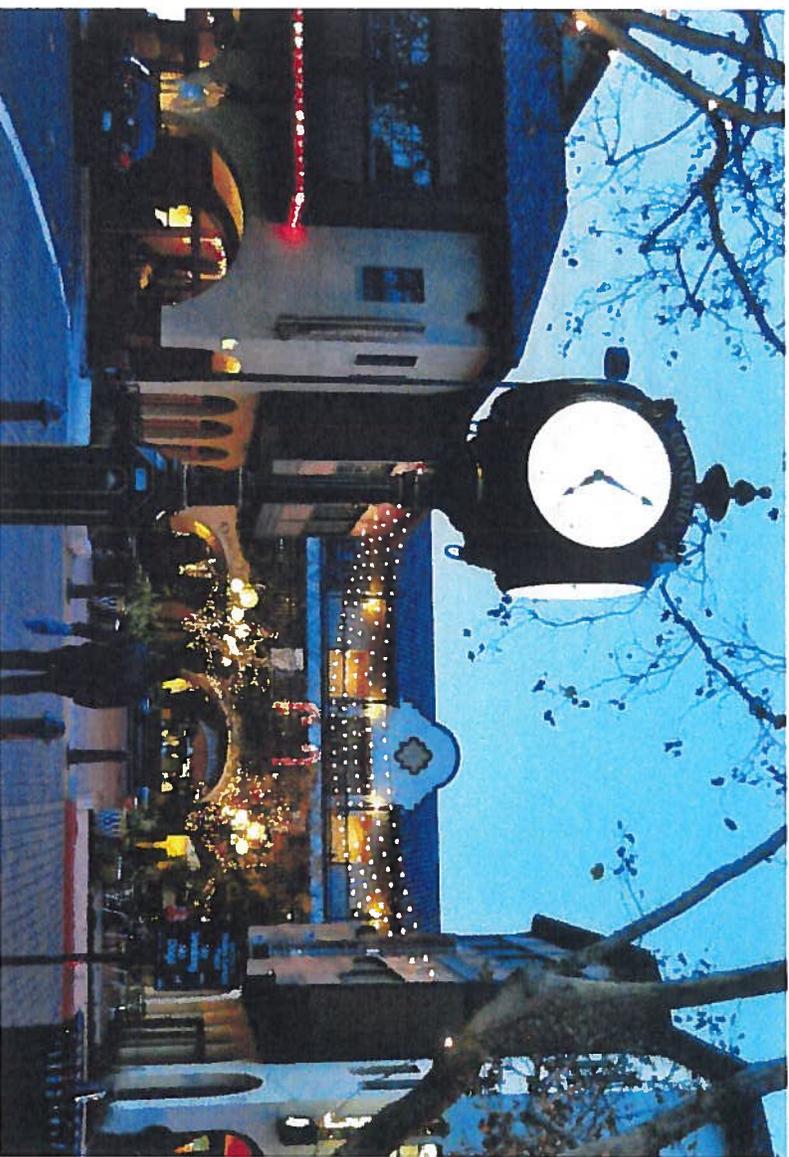
The urban form around Todos Santos is defined by buildings ranging from low rise/single story to three stories and has active ground floor uses that support the activity and vitality of the park. Higher density office commercial is predominantly situated near the BART station and Clayton Road. These tall buildings provide a sense of skyline to the City, become an important commercial focus and surround Todos Santos Plaza on three sides, creating a low rise/pedestrian center to the City.

The project area is characterized by a strong square/rectangular street grid that is highly walkable. In areas where the grid has been aggregated into larger blocks to accommodate higher density and larger footprint buildings (such as at the Park & Shop Shopping Center and near the BART Station), pedestrian walkability and accessibility decrease, creating a strong disconnection from the surrounding area. It is notable that the Central Business District and Retail Center have a strong correlation between generally larger building footprints and larger block size, whereas the residential districts and downtown core exhibit smaller buildings and smaller block sizes and increase walkability.

The project area is marked by a number of historic buildings that exemplify early central California architecture. Their character is defined not only stylistically, but through key elements that the following design guidelines will illustrate. These generally include but are not limited to the following:

- Breaking up single large block buildings into a smaller series of buildings/variation in the facades to create a finer building grain fabric
- Providing important roofline articulations/stepping back the top floors of buildings
- Ensuring the ground floor of buildings relate and enhance the public realm/streetscape
- Providing deep reveals for window treatments
- Incorporating balconies with permeable railings
- Use of a common materials palette
- Use of arcades along specific streets

Todos Santos Plaza looking toward Salvo Pacheco Square



TODOS SANTOS PLAZA

The building form and fabric around Todos Santos Plaza and the adjacent area helps define the pedestrian character of the downtown. The small scale and fine grain fabric is an asset that new infill development should follow.



Salvio Pacheco



BART Station Area

BART STATION AREA

The BART station and associated track creates a significant divide within the urban form of the city, where higher density commercial programs exist on the northern side, while single family residential exists to the south.

The larger parcels around the BART station allow for higher density development, but the proposed density should be appropriately massed, including stepping back the top floors of buildings, creating variation within facades of buildings, and creating strong visual building breaks.

High quality architecture should be expected here, as this is a major gateway into the City and the Downtown. Buildings that surround the proposed BART plaza should be planned and designed in a cohesive manner, with entries and ground floor uses that are accessible to pedestrians and transit users.

PARK & SHOP AREA

As this area redevelops, establishing a building form that promotes pedestrian activity, is inviting and is built at a pedestrian-scale will be critical to ensuring success for this area. Allowing buildings to relate to the street will be important, as well as promoting a strong streetscape to help modulate the speed of traffic along Willow Pass and Clayton Road.



Existing Park + Shop parking and retail

DOWNTOWN CONCORD SPECIFIC PLAN

4.3 DESIGN GUIDELINES

BUILDING SETBACK

Intent

Buildings on side and cross streets can create a more intimate scale and help hold the street volume. Setbacks on these streets are not desired except in the case of residential streets or ground floors with residential use where a private zone between public and private areas is desired. The following guidelines elaborate these conditions.

Buildings with minimal setbacks have a special relationship with the sidewalk and street. In these cases, buildings frame the street and form a well-defined street edge. Activities within the building, if seen, particularly at ground level, can provide visual interest and a degree of safety to passersby. Activities outside the building, such as outdoor dining, can enliven adjacent sidewalks. These are desirable attributes in areas with high levels of activity such as the downtown and station area.



Minimal setback and transparent facade, Sacramento, CA



Pasadena Old Town



Landscaped setback and raised entry provides privacy

Guidelines

Buildings located on all streets in the Project Area shall maintain setbacks as required by the City Zoning Codes.

Steps, stoops, porches, patios, and terraces should be allowed in the building setback zone, particularly on residential buildings where ground floor activity is important.

In residential neighborhoods with low scale buildings, the front setback shall be landscaped to enhance the street character and complement the neighborhood identity.

In case of corner lots in residential neighborhoods, the minimum permeable surface of the combined area of the front and street sideyard setback zones facing the streets should be 75 percent. These setbacks shall be landscaped to enhance the street character.

When possible, ground floor retail space should be setback a minimum of 2 feet and a maximum of 5 feet to provide for outdoor seating opportunities by way of wider sidewalks.

Building setbacks should be landscaped to ensure privacy in case of residential ground floor use.

All new developments on primary streets should build to zero front lot line with exceptions for any usable, publicly-accessible, at grade open space such as small plaza, pocket park, or a pedestrian alley.

Buildings should be sensitive to the scale and character of adjacent buildings on rear property lines.

Buildings should complement the low-scale, horizontal character of the Specific Plan area, and ensure a basic horizontal articulation, by differentiating the ground floor from the upper floors or roof.

Buildings should consider sun shading as part of a modulation and articulation strategy.

Buildings downtown should maintain a tight and varied rhythm of façades compatible with the existing character. In particular, they should relate to the typical 50 foot wide parcel width through building vertical modulation and façade articulation. Such techniques could include the use of change in façade rhythm, façade recesses, or change in materials or color.

DOWNTOWN CONCORD SPECIFIC PLAN

GROUND FLOOR TREATMENT

Commercial Ground Floor

Intent

Active, pedestrian-oriented, inviting ground floor retail is an essential component in the creation of a vibrant district and neighborhood.

Guidelines

All ground floor retail should have a primary entry from the sidewalk or from a forecourt or courtyard that has direct access to a sidewalk.

Individual storefronts shall be clearly defined by architectural elements, such as piers and separations of glass.

Commercial buildings are recommended to meet the sidewalk with an interactive ground floor use, or a transition landscaped setback, or a pocket plaza, to contribute positively to the pedestrian experience.

Ground floor retail with multiple tenants should be designed to have clear distinction between individual storefronts, entire building façade, and adjacent properties.

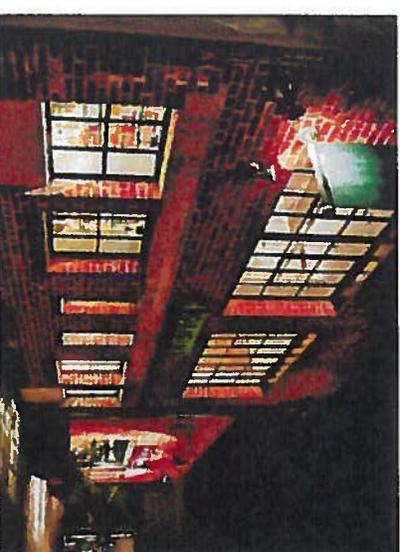
For larger retail tenants, entries should generally occur at a minimum of every 50 feet. In-line retail stores should generally have entries every 25 feet.

Recessed doorways for retail uses are allowed, and they should be a minimum of 2 feet in depth. Recessed doorways provide cover for pedestrians and customers in bad weather; they help identify the location of store entrances; provide a clear area for out-swinging doors, and offer the opportunity for interesting paving patterns, signage, and displays.

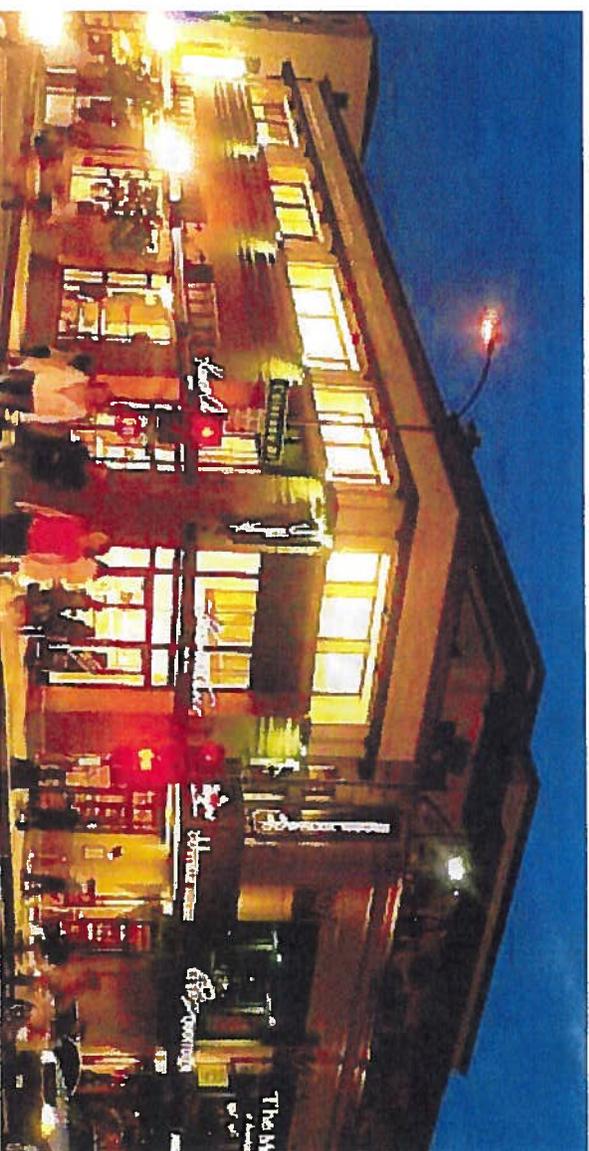
Retail frontage, whether ground or upper floor, must be clear vision glass; no heavily tinted or mirrored glass is permitted.

Storefronts should remain un-shuttered at night and provide clear views of interior spaces lit from within.

Storefront windows should provide deep merchandising zones that allow for changeable and dimensional displays. The windows should not be completely obscured with display cases that prevent customers and pedestrians from seeing inside.



Boutique retail alley



Transparent retail facade

Residential Ground Floor

Intent

The character of the building's ground floor determines the overall quality of the street level pedestrian experience. Residential ground floor use adds vibrancy and life at the street and plaza level and ensures "eyes" on the street as an important aspect for public safety.

Guidelines

Units located at ground level shall have their ground floor elevated a minimum of 18 inches above the street level for privacy, provided that local accessibility codes are met.

Internal active uses, such as community rooms, fitness center, daycare facilities and sales centers, should be placed at the ground level along the street.

Multiple entries at street level are encouraged where possible.

Direct-access residential units are recommended on primarily residential streets.

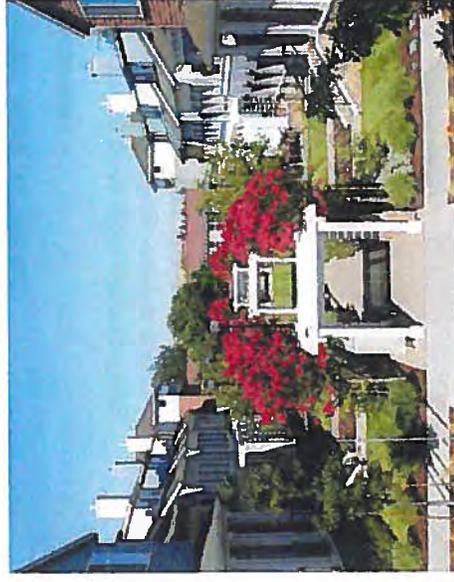
Stoops and landscaping create inviting, usable transition spaces. Stoops and entry steps from the street are encouraged for individual unit street entries, consistent with local accessibility requirements. Stoops could extend in to the building setback zone but shall not encroach into the public right-of-way.

For larger residential buildings with shared entries, entry should be through prominent entry lobbies or a courtyard facing the street. Setback at entries is encouraged.

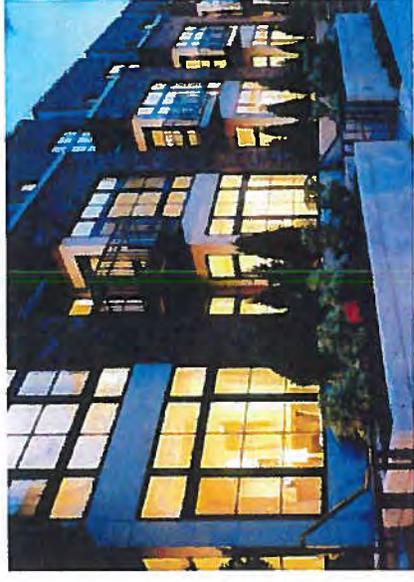
Entries should be prominent and visually distinctive from the rest of the façade with creative use of scale, materials, glazing, projecting or recessed forms, architectural details, color, and/or awnings.

Breaks in the ground floor for vehicular and service entries should be minimized.

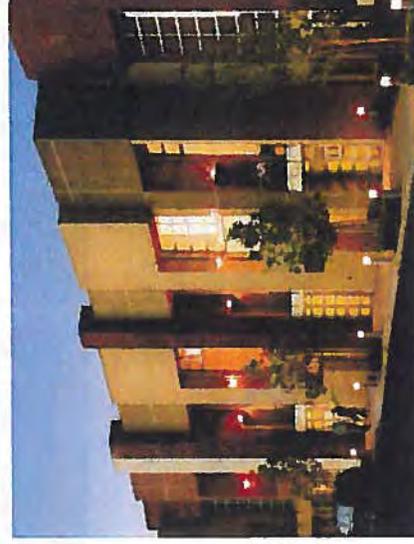
Multi-unit residential buildings are encouraged to introduce openings along the public street that provide visual or physical access to courtyards. Such openings add an element of surprise and interest at the street level.



Wisteria development, Concord, CA



Townhomes



Townhomes

Blank Wall Treatment

Intent

Treatment of blank walls should ensure pedestrian comfort, safety and interest.

Guidelines

Unavoidable blank walls enhanced with architectural detailing, material texture, landscape treatment or art work shall be no longer than a maximum length of 50 feet.

Unavoidable blank walls along public streets, besides being detailed, shall be provided with additional special lighting to ensure safety and comfort during night time.

Blank wall including solid doors should be avoided wherever possible.

Unavoidable blank walls on the ground floor along public streets and open spaces should be treated to create a pleasant visual experience. This treatment could be in the form of either:

- installing vertical trellis in front of the wall with climbing vines or plant materials,
- setting the wall back and providing a landscaped or planter bed in front of the wall, including plant materials that could grow to obscure or screen the wall's surface
- providing art (mosaic, mural, decorative masonry pattern, sculpture, relief, etc.) over a substantial portion of the blank wall surface,



Sculptural facade treatment

- employing indentations, or other means of breaking up the wall's surface,
- providing a canopy, horizontal trellis or other pedestrian-oriented features that add visual interest

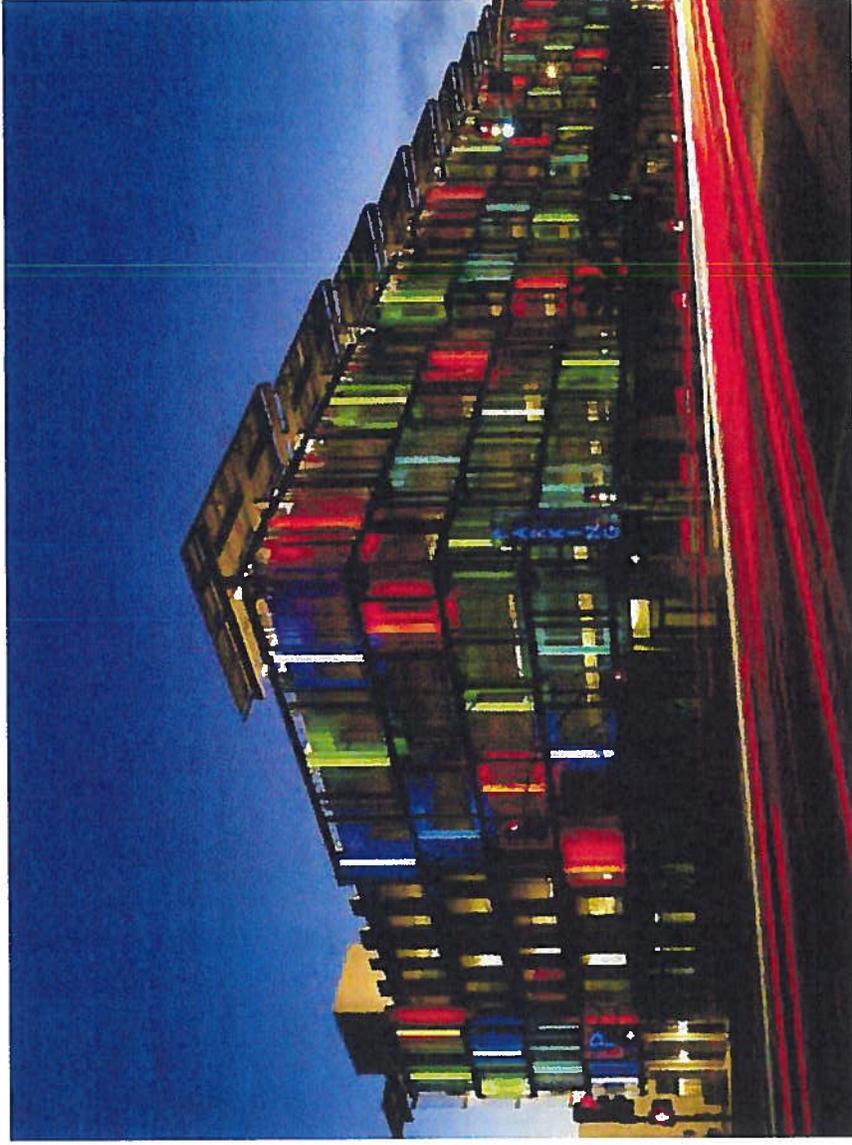
Vehicular Access

To minimize disruption to primary pedestrian-oriented streets, garage entrances should be generally located in alleys or side streets.

Garage entrances adjacent to sidewalk should be screened with landscaping techniques or should be treated as an opportunity for public art (Figure 3.51).

In mixed-use developments, in order to minimize curb cuts, shared ramps for both retail and residential uses are encouraged. In shared ramp conditions, secure access for residential parking should be provided.

In order to minimize curb-cuts, multi-unit residential buildings should consolidate their parking entries and exits to a single entry.



Santa Monica Civic Center Parking Garage facade

DOWNTOWN CONCORD SPECIFIC PLAN

Residential/Mixed Use Building Design

Intent

Residential/mixed use buildings represent the largest amount of new program in the Project area. Therefore these new buildings should conform to key aspects of massing, pedestrian scale and promotion of ground floor usage. These elements are essential to creating a livable and vibrant Downtown.

Guidelines

Multi-unit buildings should depict a rhythm and scale that relates to the surrounding buildings. In case of adjacent buildings being smaller in scale, such as single-family units, the multi-unit buildings should maintain the scale of the adjacent buildings on the street front. It should place the bulk of the building mass away from the street towards the center of the block.

Multi-unit buildings should have modulation in massing to avoid a box-like structure. Creating terraces, recessing windows and use of step backs create distinct smaller volumes.

Multi-unit buildings should articulate their facade to avoid a flat, monotonous appearance. Use of projecting building elements, windows or balconies helps break the façade and reduce the apparent size of the building.

Primary facades of new buildings should be compatible with surrounding buildings in relation to the width and proportions of elements like front porches, stoops, overhangs, projected components and roofs.

Roofs should be treated as the fifth façade of the building since they play a major role in the appearance and character of a building. Level changes of the roof help soften the mass of the building.

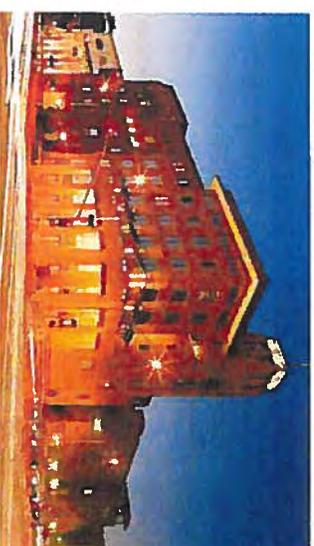
The scale, proportions and placement of the architectural details on all new building facades should be compatible with the overall aesthetics of the surrounding buildings.

Buildings on corner lots should articulate both their street-facing facades. Facade treatment and openings on both these exposed surfaces should be designed to optimize the greater street visibility and accessibility to sunlight and air.

Wherever possible, corner lot buildings are encouraged to include a corner entry.



Paseo Chappala, Santa Barbara, CA



Residential building reflecting early California architectural style



Mixed-Use Housing, Santa Monica, CA

Commercial Building Design

Intent

Large commercial buildings should be detailed to integrate well in its surrounding context.

Guidelines

Commercial buildings with a large mass should be broken down in to smaller distinct volumes to avoid a box-like structure.

Long, continuous facades should be articulated with architectural elements and wall plane projections or recesses to reduce the massive scale and uniform physical appearance.

Expression of the structural elements and bays of the building on the façade is encouraged. Windows, wall panels, and pilasters should be based on a module derived from the building's structural bay spacing.

Street-level frontage adjacent to public streets or open spaces should be articulated with entrances, lobbies, storefront windows and displays to enliven the public realm experience.

Commercial buildings are encouraged to have variations in rooflines to enhance the distinct massing.

Mechanical Equipment

Mechanical equipment on top of the buildings should be screened from both pedestrian and adjacent rooftop views. The screen should be designed to be architecturally integrated as part of the roofscape or the building facade.

Intensive or extensive green roofs that help reduce storm water run-off should be explored for all rooftops.

Utilities

All utilities in conjunction with new residential and commercial development should be placed underground.

Above ground meters, boxes and other utility equipment should be screened from public view through use of landscaping or by integrating into the overall building design



Facade articulation, Portland, OR



Facade articulation, San Francisco, CA

DOWNTOWN CONCORD SPECIFIC PLAN

4.4 PARKING AND SERVICING

PARKING STRUCTURES AND GARAGE ENTRANCES

Intent

Due to their scale and treatment, parking structures are very often a disruptive element in the urban fabric. It is important to locate and access parking structures and residential garages such that the overall pedestrian flow and experience on the public streets is not compromised.

Parking podiums and below ground parking are encouraged as a way to screen large volumes for parking for residential and commercial developments.

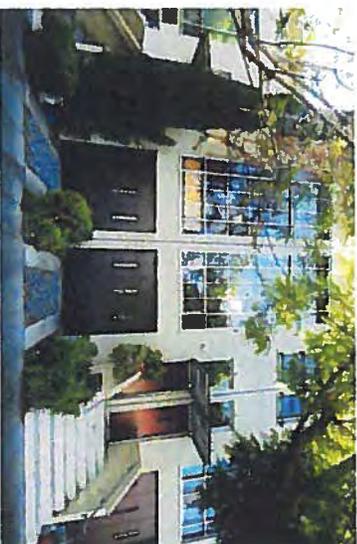
Guidelines

Parking structure lighting shall provide adequate security, but openings shall be screened and controlled so as not to disturb surrounding residences and streets from garage lighting at night.

Gates for podium parking/parking garages should be opaque and match the building in terms of aesthetic character

Parking garage driveways should not be placed on major pedestrian streets (e.g. Grant Street)

Parking garages and surface parking areas should be screened from pedestrian areas (streets and open spaces) with landscaping, liner uses such as retail, lobbies, community uses, or residential units. All service areas must be screened and not placed along major pedestrian streets or access ways. Surface parking should be visually attractive, address security and safety concerns, retain existing mature trees and incorporate canopy trees for shade.



Kethner rowhouse, San Diego, CA



Magnolia Row driveway, Oakland, CA

4.5 PRIVATE OPEN SPACE

The provision and treatment of private open space on individual parcels can enhance the character of public streets and sidewalks and private development. It can add to available public open space in the area.

The Specific Plan encourages use of the following guidelines when incorporating open space in private developments.

Guidelines

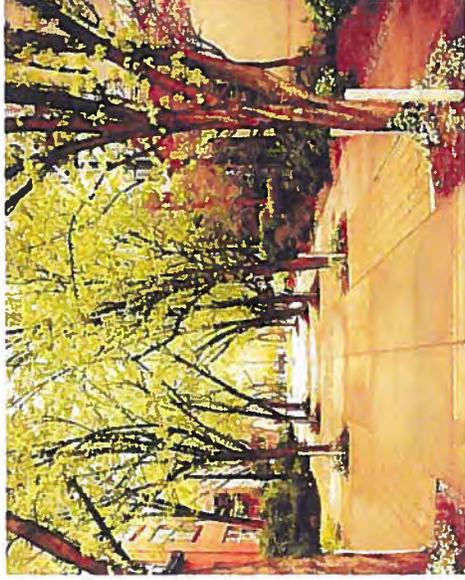
Private and/or common open spaces are encouraged as part of building modulation and articulation to enhance building facades.

Private developments should provide accessible and usable common open space for building occupants and/or the general public.

For residential developments, private open space should be designed as an extension of the indoor living area, providing an area that is usable and has some degree of privacy.

Landscaping in setback areas should define and enhance pedestrian and open space areas. It should provide visual interest to streets and sidewalks, particularly where building facades are long.

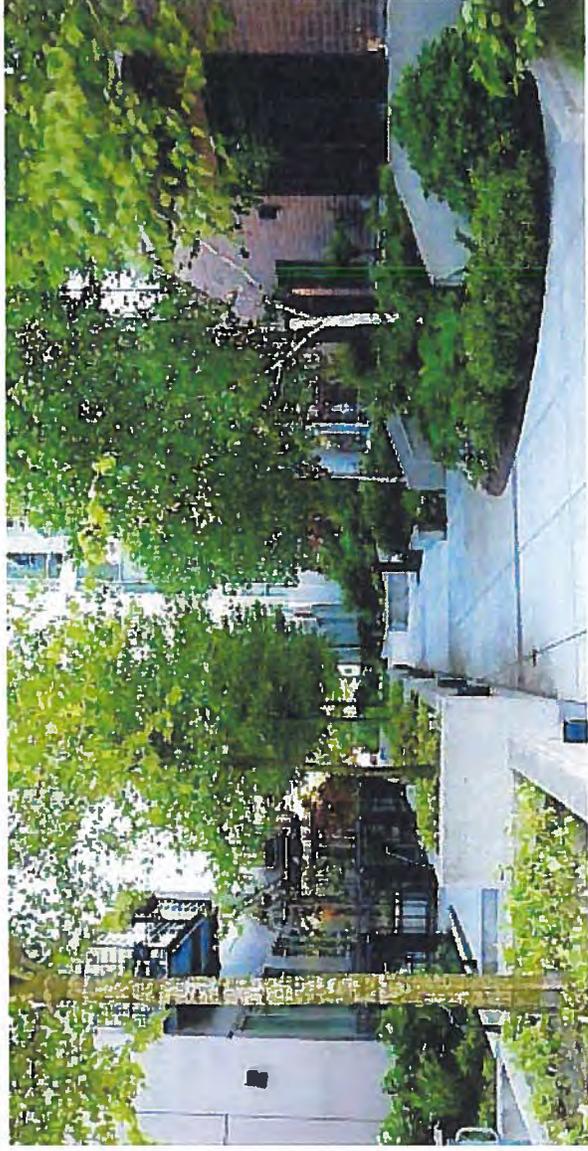
Landscaping of private open spaces should be attractive, durable and drought resistant (see Section Sustainable Practices-Landscape Guidelines for details)



Mid-block access, Portland, OR



Mission Creek housing, San Francisco, CA



Shared courtyard, Portland, OR

4.6 SUSTAINABLE PRACTICES

Sustainable practices for new construction support community and environmental well-being by utilizing finite resources in a responsible way, creating healthy environments for building inhabitants and minimizing impacts to both natural systems and existing utilities (i.e. water, wastewater and energy systems). The City of Concord supports sustainable practices through its 2013 Climate Action Plan.

Sustainable practices address: 1) the environmental impacts of site development and building construction; and 2) the long-term environmental impacts of the operation of buildings resulting in the emission of greenhouse gases (GHGs), in particular carbon dioxide (CO₂), which is causing the global climate to change. Currently, there are excellent tools to measure ways to reduce environmental impacts caused by building construction, and new tools are emerging to measure greenhouse gas emissions caused by building operations over the long term.

To address impacts caused by construction, the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) rating system measures specific site development and new building construction methods related to environmental issues, such as energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality and stewardship of resources and sensitivity to their impacts.

To address GHG emissions, the world's leading green building organizations have agreed to adopt a common global language for the measurement of the carbon footprint of buildings. The "common carbon metric" will be piloted by the leading green building rating tools. This should lead to the cost-effective GHG mitigation potential of buildings, which account for around 40% of the world's energy use and 33% of global GHG emissions.

MEASUREMENT TOOLS

Development and Construction Tools

The LEED program has performance levels from "Certified" to "Platinum" and rating systems that address different types of construction and building operation, including LEED for Neighborhood Development, LEED for New Construction, and LEED for existing buildings, operations and maintenance. Many municipalities in the Bay Area have adopted Green Building Ordinances that require certain levels of LEED certification for different types of projects.

The Specific Plan proposes that all new development in the Project Area meet LEED Silver Standards



Stormwater management and green street

Greenhouse Gases/Carbon Tools

The 2030 Challenge is an initiative by Edward Mazria and Architecture 2030 asking the global architecture and construction community to adopt a series of greenhouse gas reduction targets for new and renovated buildings. In response to the global-warming crisis, the 2030 Challenge's mission is to rapidly transform the US and global Building Sector from the major contributor of greenhouse gas emissions to a central part of the solution to the global-warming crisis.

The "carbon metric" measurement device is currently being developed and will be integrated into the LEED program in the future.

Initiatives

Local and regional initiatives address sustainable development and reduction of greenhouse gases.

Local Initiatives

The City of Concord published a Climate Action Plan (CAP) in 2013. The CAP includes recommendations for environmentally responsible development and ways to reduce greenhouse gas emissions. The CAP's recommendations for sustainable building and development practices refer to a phased program for submittals of Green Building Checklists related to development projects. The CAP also recommends early adoption of the California Green Building Code.

Guidelines

LEED certification, at a silver level or higher, should be required for the types of projects listed below. The applicable LEED® versions of performance standards are: LEED®- v3 (2009) New Construction; LEED®- v3 (2009) Core and Shell; LEED®- v3 (2009) Schools; and LEED®- v3 (2009) Commercial Interiors. LEED certification, at a silver level or higher, should be required for:

Newly constructed (Residential) occupancy buildings with three or more dwelling units;

- Because the development of larger parcels provides the ability to incorporate cost effective carbon reduction features and renewable energy sources, development projects over 4 acres of land should have more stringent sustainability requirements and GHG reduction targets. These could include being certified at a LEED ND (neighborhood development) level of gold, and mandating a phased reduction of GHG emissions over a period of time, such as those prescribed in the 2030 Challenge.
- Because green building standards are constantly evolving, the requirements in this section should be reviewed and updated on a regular basis of at least every two years.

- Newly constructed commercial buildings occupancies including among others office, professional and service type transactions and occupancies including among others display or sale of merchandise such as department stores, retail stores, wholesale stores, markets and sales rooms) that are 5,000 gross square feet or more;

- New first-time build-outs of commercial interiors that are 20,000 gross square feet or more in buildings of Group B and M occupancies; and
- Major alterations that are 20,000 gross square feet or more in existing buildings of where interior finishes are removed and significant upgrades to structural and mechanical, electrical and/or plumbing systems are proposed.

Solar Access Guidelines

Buildings should incorporate narrow floor plates to allow natural light deeper into the interior.

Buildings should reduce use of daytime artificial lighting through design elements, such as bigger wall openings, light shelves, clerestory lighting, skylights, and translucent wall materials.

Buildings should allow for flexibility to regulate the amount of direct sunlight into the interiors. Louvered wall openings or shading devices like bris soleils help control solar gain and check overheating. Bris soleils, which are permanent sun-shading elements, extend from the sun-facing facade of a building, in the form of horizontal or vertical projections depending on sun orientation, to cut out the sun's direct rays, help protect windows from excessive solar light and heat and reduce glare within.

Where appropriate, buildings should incorporate arcades, trellis and appropriate tree planting to screen and mitigate south and west sun exposure during summer. This guideline would not apply where buildings have a minimum setback and street trees provide adequate shade.

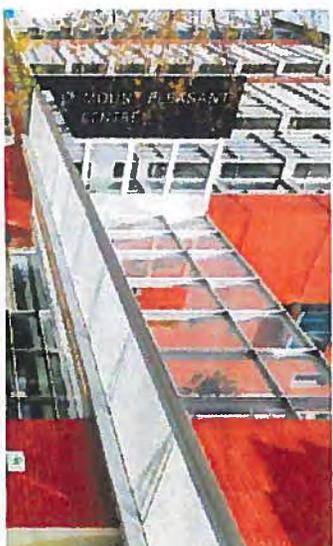
To maximize use of solar energy, buildings should consider integrating photovoltaic panels on roofs.

Stormwater and Wastewater Management Guidelines

Buildings should incorporate intensive or extensive green roofs in their design. Green roofs harvest rain water that can be recycled for plant irrigation or for some domestic uses. Green roofs are also effective in cutting-back on the cooling load of the air-conditioning system of the building and reducing the heat island effect from the roof surface.

Projects should use porous material on driveways and parking lots to minimize stormwater run-off from paved surfaces.

Effective stormwater management techniques are recommended. Such techniques could include bioswales on surface parking lots and rain gardens in landscaped areas.



Roof photovoltaics, light shelf and green roof



Street lighting examples

Landscaping Guidelines

Planting plans should support passive heating and cooling of buildings and outdoor spaces.

Regional native and drought resistant plant species are encouraged as planting material.

Provision of efficient irrigation system is recommended, consistent with the City's Municipal Code Chapter 12.44 "Water-Efficient Landscaping".

Lighting Guidelines

Energy-efficient and color-balanced outdoor lighting, at the lowest lighting levels possible, are encouraged to provide for safe pedestrian and auto circulation.

Glare into dwelling units and light pollution into the night sky should be minimized by use of fixtures with low cut-off angles.

Improvements should use ENERGY STAR-qualified fixtures to reduce a building's energy consumption.

Installation of high-efficiency lighting systems with advanced lighting control, including motion sensors tied to dimmable lighting controls, are recommended.

Green Building Material Guidelines

The reuse and recycle of construction and demolition materials is recommended. The use of demolition materials as a base course for a parking lot keeps materials out of landfills and reduces costs.

The use of products with identifiable recycled content, including post-industrial content with a preference for post-consumer content, are encouraged.

Building materials, components, and systems found locally or regionally should be used, thereby saving energy and resources in transportation.

Layouts with adequate space to facilitate recycling collection and to incorporate a solid waste management program, preventing waste generation, are recommended.

The use of material from renewable sources is encouraged.



05 Circulation + Transportation

5.1 OVERVIEW

This chapter describes the transportation and circulation system for the Downtown Specific Plan area. The transportation and circulation system is a critical component to the effective and safe movement of people and goods within the Plan Area and the surrounding community. This Chapter outlines the Specific Plan's goals and policies related to transportation and circulation, and describes specific changes to the street network that will promote these goals and policies.

The Specific Plan area accommodates all travel modes, with an emphasis on pedestrians, bicyclists and transit users. Focusing new development in and around the BART station and downtown core and with a diversity of uses in close proximity reduces the reliance on private motor vehicles, helping to minimize traffic congestion, the amount of land dedicated to parking and greenhouse gas emissions.

The Specific Plan envisions the following:

- A vehicular circulation system that accommodates both local traffic and through traffic with built-in flexibility to allow other modes of travel to take priority on certain streets as defined by this Specific Plan.
- An integrated pedestrian network of expansive sidewalks and roadway crossings within the study area, with particular emphasis on streets within the pedestrian priority zone
- A bicycle network that builds upon existing plans and integrates more fully with the downtown and proposed public space improvements in the area
- An integrated circulation plan that supports transit use
- A public parking strategy and management plan that efficiently accommodates downtown visitors and supports downtown businesses
- Flexible parking standards for private development based on current industry standards

DOWNTOWN CONCORD SPECIFIC PLAN

5.2 CIRCULATION

The *Concord 2030 General Plan* identifies the classification of roadways within the SPA according to traditional roadway typologies. These designations include arterials, which are designed to deliver traffic between freeways and collector streets, and may experience a high percentage of regional through traffic, to local roadways that are designed to provide direct access to adjacent properties. Throughout the city and Downtown area, operations of roadway facilities are typically evaluated based on peak hour operations of intersections from the perspective of a vehicle driver, otherwise known as Level of Service (LOS). Development of a transportation system based on vehicle level of service with minimal regard for the experience of bicycle, pedestrian, and transit users creates a bias that unintentionally but inherently ignores overall mobility and conditions for non-auto road users and perpetuates a system that focuses on expanding vehicle capacity, which can reduce mobility via other modes of travel. While some roadway enhancements are necessary to maintain vehicle flow for transit vehicles and overall mobility, expanding the roadway system to accommodate increased vehicle traffic is not feasible or practicable in a built-out area such as Downtown Concord. As part of the Specific Plan, modal priorities for each roadway facility within the plan area were identified to provide clear direction about the desired functionality of each street, and to provide direction when there are conflicts between modes of travel:

GOAL C-1: A system of complete streets that recognizes the modal priorities of each facility.

The following discusses the street typology for the Study Area that complements the recent Complete Streets update of the City's General Plan Circulation element. Complete Streets are designed and operated to enable safe, attractive and comfortable access and travel for all users. Pedestrians, bicyclists, motorists and public transit users of all ages and abilities are able to safely and comfortably move along and across a network of complete streets. Creating a complete street network allows modal priorities to be established for each roadway, as some streets are better suited to goods movement, transit circulation and through trips, while on other streets it is desirable to promote pedestrian and bicycle circulation, while de-emphasizing automobile travel. This approach recognizes that it is not desirable to have all streets serve all modes of travel equally and establishing priorities provides direction on the future design of enhancements to each roadway facility within the Study Area.

Policy C-1.1 (General Plan Policy T-1.1.5):

Maintain transportation levels of service benchmarks which consider not only vehicle speed and intersection delay, but also broader goals relating to environmental quality and community character. Lower levels of service may be acceptable in Downtown Concord, within one-half mile of the City's two BART stations, along designated transit routes (as shown in Figure 5-4), and in other locations as deemed appropriate by the City Council.

Policy C-1.2: Adopt a street designation overlay for the Specific Plan area as shown in Table 5.1, and described below.

Transit Street – These are primary routes for CCCTA, Tri-Delta Transit and potentially a downtown shuttle. Signal preemption for transit vehicles, bus stops, and, where appropriate, bus lanes and queue jump lanes are allowed. Other travel modes, including automobiles, bicycles, and trucks, are accommodated in the roadway, but if there are conflicts, transit has priority. These streets accommodate moderate to high volumes of through traffic within and beyond the city. Pedestrians are accommodated with sidewalks, and pedestrian amenities are enhanced around bus stops. This would include Concord Boulevard, Clayton Road, Concord Avenue, Galindo Street and portions of Willow Pass Road.

Connector Street – Automobiles, bicycles, and trucks are accommodated equally in the roadway. Transit use, if any, is incidental. These streets accommodate moderate to high volumes of through traffic within and beyond the city. Pedestrians are accommodated with sidewalks. Connector Streets in the Study Area include Market Street and Gateway Boulevard.

Local Street – Automobiles, bicycles, and trucks are accommodated equally in the roadway. Through truck traffic is only permitted if the street is a designated truck route, otherwise, all truck use is limited to local deliveries. Transit use, if any, is incidental. These streets accommodate low volumes of local traffic and primarily provide access to property. Through traffic is discouraged. Traffic management techniques to slow and discourage through automobile and truck traffic may

Table 5.1
Transportation Facilities Modal Priority Matrix

Facility	Transit	Bicycles	Pedestrians	Autos	Trucks
Transit Street /1/	★	■	■	■	■
Bicycle Boulevard	■	★	■	■	▼
Bicycle Path (class I)	◆	★	★	◆	◆
Pedestrian Path	◆	◆	★	◆	◆
Connector Street /1/	□	■	■	■	■
Local Street /1/	□	■	■	■	▼

★ = dominant

■ = accommodated

▼ = Permitted for local deliveries only

□ = incidental

◆ = prohibited

/1/ Bike routes (class II and III) can be overlaid on these street types

be appropriate. Pedestrians are accommodated with sidewalks. These include minor streets in the plan area, such as Pine Street, Adelaide Street, Sutter Street, Fremont Street, Almond Avenue and portions of Mt. Diablo Street.

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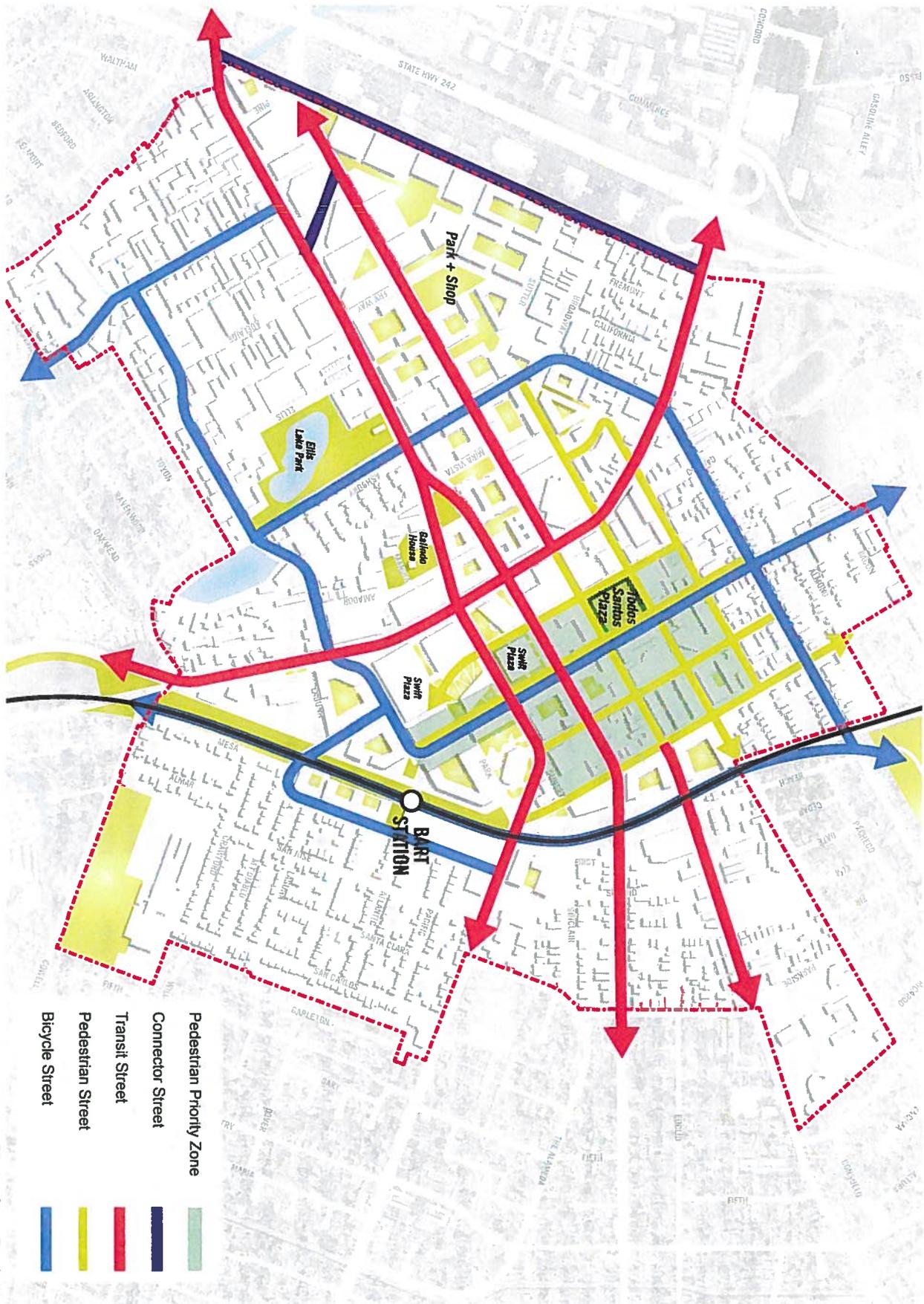


Fig. 5.1 Street Typologies

Bicycle Boulevard – These are routes for bicycles providing continuous access and connections to the local and regional bicycle route network. Through motor vehicle traffic is discouraged. High volumes of motor vehicle traffic are also discouraged, but may be allowed in localized areas where necessary to accommodate adjacent land uses. Local automobile, truck, and transit traffic are accommodated in the roadway, but if there are conflicts, bicycles have priority. Through truck traffic is only permitted if the street is a designated truck route, otherwise, all truck use is limited to local deliveries. Traffic management to slow and discourage through automobile and truck traffic may be appropriate. Pedestrians are accommodated with sidewalks. These streets will be formally designated as part of the City's Bicycle Master Plan, but will likely include some of the potential streets identified in this plan, including Detroit Avenue, Laguna Street, and Bonifacio Street/Harrison Street.

Major Transit Hub – These are transfer points where high volume transit lines intersect, such as the BART station.

Bicycle Path – Class I Bicycle path as defined by Caltrans standards accommodates both bicycles and pedestrians. Motor vehicle traffic is prohibited.

Bike Route – Class II (bike lanes) or Class III (signed route) bike facilities as defined by Caltrans standards, are overlaid on transit, connector, and local streets. While bicycle use is always accommodated on these streets, it is encouraged along designated bike routes, which provide continuous access and connections to the local and regional bicycle route network.

- *Residential Areas: 6 feet* which allows two people to comfortably stroll side-by-side.
- *Central Business Districts (CBD) and Mixed-Use Areas: 8 feet*, however wider sidewalks are needed in areas with high pedestrian volumes, bus stops, street furniture, etc.

The figure and table below provide dimensions of street furniture and other design features to be considered when establishing sidewalk widths.



Fig. 5.3 Recommended Minimum Street Widths

Pedestrian Path – These are exclusive walkways for pedestrians. Bicycles and motor vehicles are prohibited.

Pedestrian Priority Zone – These are streets on which high volumes of pedestrian traffic are encouraged along the sidewalk. Sidewalks should be wide with ample pedestrian amenities. Building frontages should provide high level of pedestrian interest. Pedestrian crossings should have a high priority at intersections. In some locations, well-protected mid-block crosswalks may be appropriate. Roadways connecting to the BART station and around Todos Santos Plaza have been designated

as pedestrian priority zones. Consolidating and eliminating driveway access from pedestrian priority streets can be considered to minimize pedestrian/vehicle conflicts. For streets and intersections within the Pedestrian Priority zone, lower levels service for vehicles may be permitted, as specified in the General Plan.

Table 5-1 provides a matrix describing how different modes of transportation (shown in the columns) interact on various street types (shown in the rows) and which modes have priority on each street type.

DOWNTOWN CONCORD SPECIFIC PLAN

5.3 VEHICLE CIRCULATION

The Specific Plan generally retains the existing vehicular circulation system and travel patterns, with some modifications to better accommodate pedestrian and bicycle movement. Conversions of some one-way streets to two-way streets were considered for Pacheco Street between Concord Avenue and Mt. Diablo Street, and on Harrison Street between Broadway Street and Concord Avenue. An analysis of this potential conversion indicates that conversion from one-way to two-way travel would not result in significantly worsened travel through the corridor for vehicles and would enhance bicycle and pedestrian accessibility within the area.

However, extensive intersection reconstruction would be required to avoid worsening conditions for pedestrians. Therefore, these changes might be better considered as a long-term improvement to be implemented with other land use and network changes in the area and may be further considered with redevelopment of the adjacent parcels; therefore, these conversions are not included in the Specific Plan at this time.

Proposed modifications to vehicle circulation within the Specific Plan Area, as shown in Figure 5.3, include:

- Signalization of the Clayton Road at Sutter Street and Detroit Avenue at Laguna Street intersections to better facilitate pedestrian crossings. Modifications to the Grant Street at Clayton Road signal to provide a protected southbound left-turn pocket
- Elimination of one vehicle travel lane on Clayton Road and Concord Boulevard between Galindo Street and Grant Street to provide buffered bike lanes. Level of service analysis indicates that operations for vehicles would not degrade below the established benchmark under existing or projected future conditions.
- Reconfiguration of Oakland Avenue between Mount Diablo Street and Clayton Road from four vehicle lanes to three to provide Class II bicycle lanes in each direction, providing last mile connections to the BART station.
- Traffic management along the Willow Pass Road corridor through measures such as traffic signal timing to moderate travel speeds through the corridor.

Installation of all-way stop-control at the Oak Street/Grant Street intersection and conversion to a raised intersection to better prioritize pedestrian travel to the BART station.

GOAL C-2: Efficient but managed vehicle access in the Plan Area.

Policy C-2.1: Continue to evaluate the effects of land use development on the overall circulation system through the preparation of focused transportation impact studies. Guidelines should be prepared that identify the analysis procedures for evaluating the effects of development on all modes of travel.

Policy C-2.2: Eliminate the level of service benchmarks for vehicles within the pedestrian priority zone.

Policy C-2.3: Update the City's Transportation Impact Fee to include non-motorized projects within the Specific Plan Area. These improvements would shift existing and future trips to non-auto modes, thereby freeing up capacity for new vehicle trips within the plan area.

Policy C-2.4: Evaluate potential improvements on Galindo Street between Salvio Street and Laguna Street to improve vehicle flow within the existing cross-section and better accommodate pedestrian, bicycle and transit travel.

5.4 PEDESTRIAN CIRCULATION

The Specific Plan anticipates that new development and redevelopment would increase the number of pedestrians in the plan area. To facilitate development of a more pedestrian- friendly environment within the plan area and to encourage more travel to be made on foot, thus reducing the number of vehicles and their associated parking needs, potential enhancements to the pedestrian realm have been identified. Improvements include:

- Rehabilitation of approximately 30 crosswalks in the downtown area, including the replacement of non-ADA compliant curb ramps and installation of decorative pavement, as shown in Figures 5.4 and 5.5.
- Signalization of the Clayton Road at Sutter Street and Detroit Avenue at Laguna Street intersections to better facilitate pedestrian crossings
- Intersection enhancements at the Detroit Avenue at Laguna Street intersection to provide ADA ramps, curb extensions and advanced stop bars
- Replacement of sidewalk on the north side of Willow Pass Road between Sutter Street and Gateway Boulevard to provide a wider sidewalk, a seat-wall and replacement of non-ADA compliant curb ramps
- Evaluation of a reduction in cycle lengths throughout the Downtown area to decrease pedestrian wait time at all signalized intersections, particularly on weekends, and off-peak times
- Enhancements to the existing high-visibility crosswalks at Oakland Avenue/Prospect Street and Oakland Avenue/Atlantic Street with a pedestrian crossing warning system (e.g. RRFB or LED blinker signs)



LED lighted crossing



crosswalk paint treatment



Marked crossing

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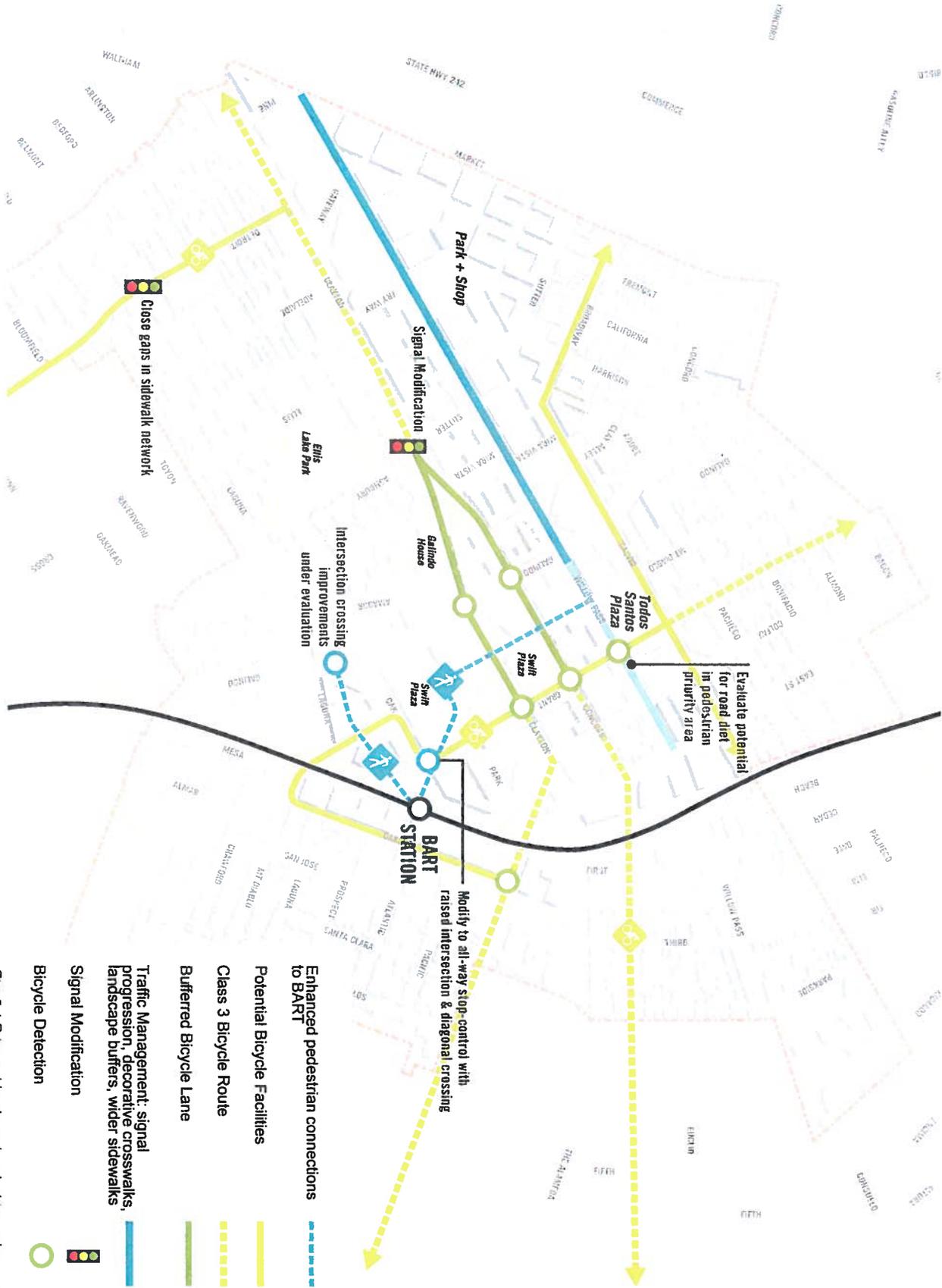
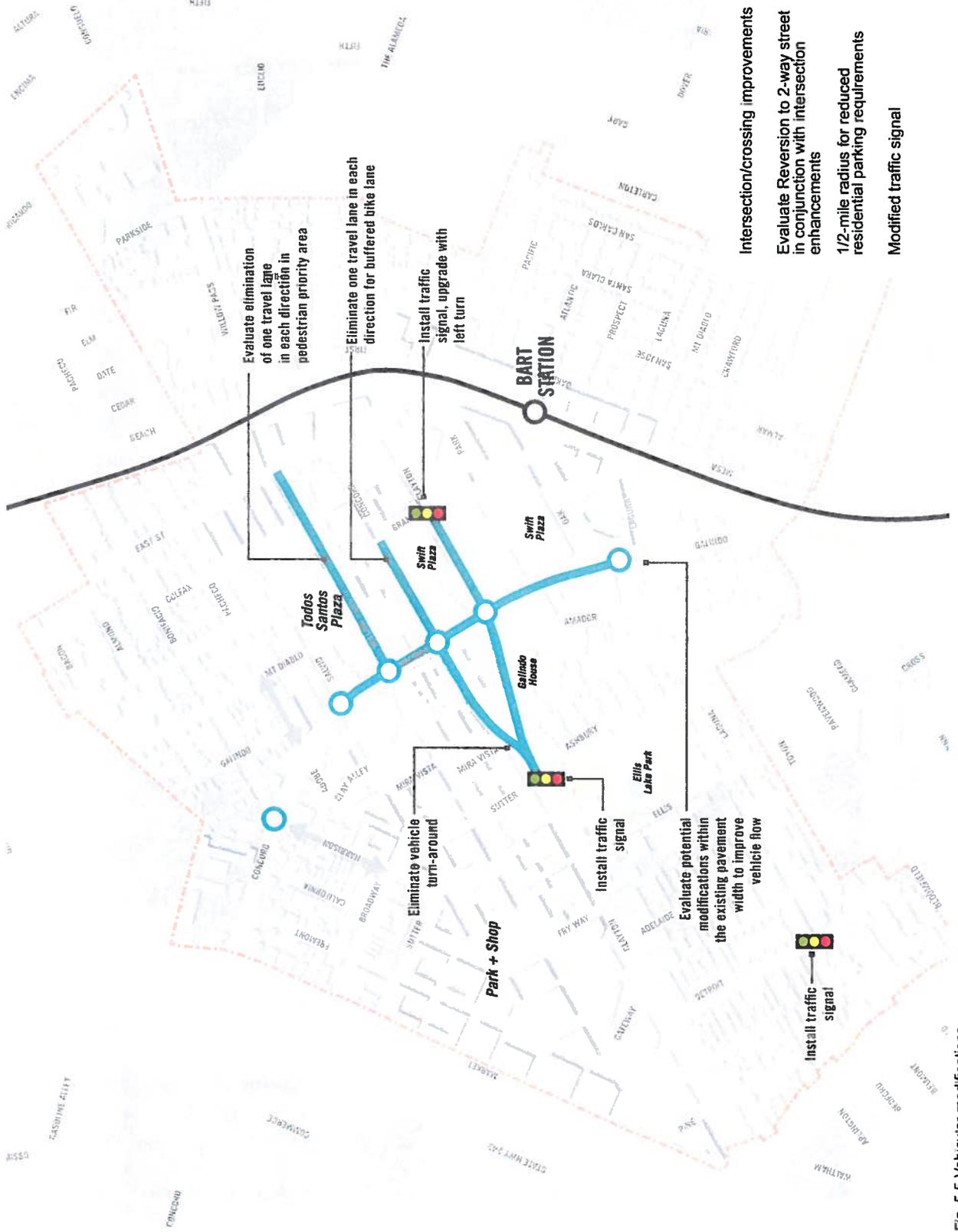


Fig. 5.4 Primary bicycle and pedestrian enhancements

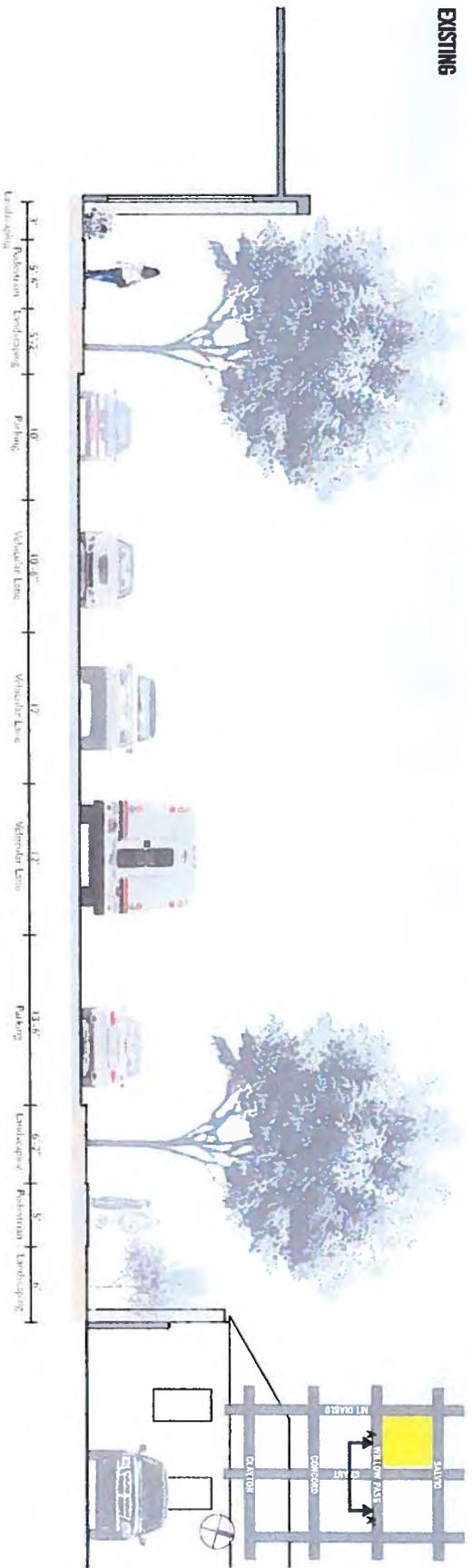


- Intersection/crossing improvements
- ↔ Evaluate Reversion to 2-way street in conjunction with intersection enhancements
- 1/2-mile radius for reduced residential parking requirements
- 🚦 Modified traffic signal

Fig. 5.5 Vehicular modifications

DOWNTOWN CONCORD SPECIFIC PLAN

EXISTING



PROPOSED

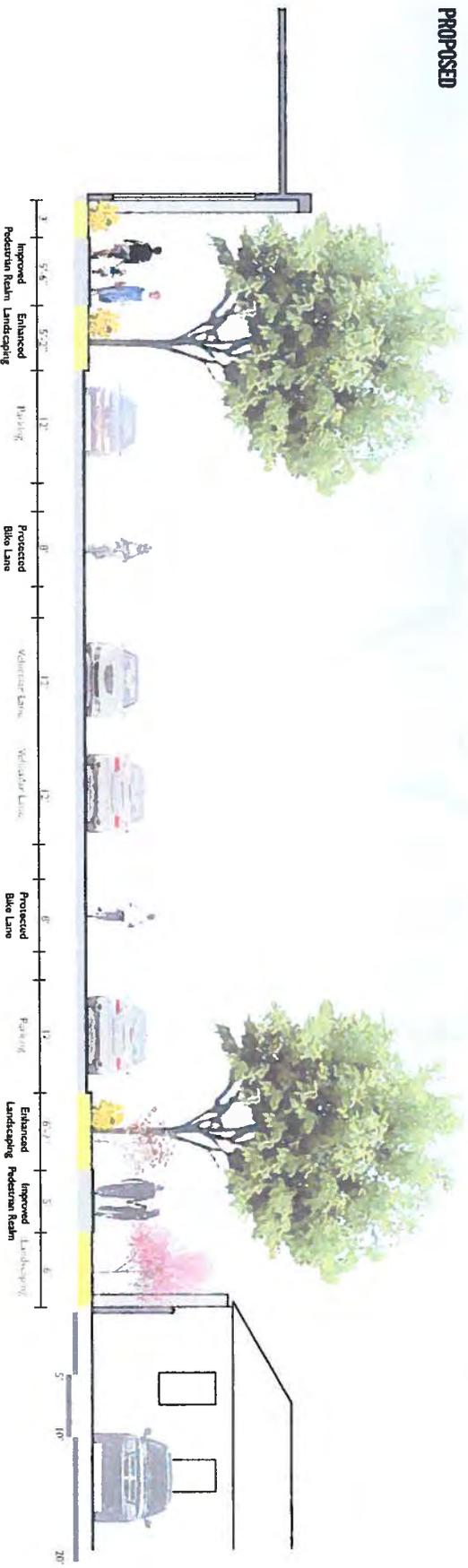


Fig. 5.6 Existing and proposed Grant Street sections at Willow Pass Road



Fig. 5.7 Existing and proposed Grant Street sections at Concord Boulevard

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GOAL C-3: Quality pedestrian facilities and amenities that create a safe and aesthetically pleasing environment that encourages walking and accommodates increased pedestrian activity.

For streets within a pedestrian priority zone, there are a number of treatments that can be considered, including wider sidewalks, intersection crossing enhancements, landscape buffers, on-street parking, partial street closures, reduced traffic signal cycle lengths, pedestrian count-down signals, elimination of permitted left-turn phasing (which eliminates right-of-way conflicts between left-turning vehicles and pedestrians) and elimination of automobile level of service benchmarks for intersection operations. Within the study area, Willow Pass Road is a perceived barrier between the existing pedestrian orientated area around Todos Santos Plaza and the BART station.

For the area of Willow Pass Road between Galindo Street and East Street, there are several strategies that could be considered. Exempting the intersections along this section from auto level of service benchmarks might permit increased pedestrian crossing times and decreased traffic signal cycle lengths that would reduce delay pedestrian for pedestrians waiting to cross the street. Other potential treatments include raised crosswalks, and signal timing changes that limit the speed of traffic on the roadway. Eliminating/consolidating driveways as parcels redevelop (if there are other vehicle access alternatives) would decrease vehicle/pedestrian conflicts at those locations and allow for better sidewalk continuity in the pedestrian priority area.



Existing Grant Street streetscape, looking north towards Todos Santos Plaza



Conceptual rendering of potential future Grant Street streetscape, looking north towards Todos Santos Plaza

Another strategy for the pedestrian priority area would be to eliminate one lane of auto travel in each direction on Willow Pass Road between Galindo Street and East Street, and reallocate the right-of-way to other roadway users. This is commonly referred to as a road diet. There is limited capacity on parallel and intersecting routes to accommodate the additional traffic, and this design change would increase delay for vehicles at intersections on either end of the road diet as vehicle flow is metered into the area. However, this would allow for any number of improvements along the segment such as widening of the sidewalks, providing on-street parking, a wider median with additional landscaping, curb extensions, and other enhancements.

Potential improvements to Grant Street, illustrated in the adjacent rendering, are recommended to improve the experience of the street that serves as the main connection between the BART station and downtown. Streetscape and infrastructural enhancements include new bike lanes and bike route signage, a raised intersection with vehicular stop control, and other signal modifications to improve traffic flow and pedestrian safety.

Policy C-3.1: To the extent feasible, eliminate existing and minimize future driveways and curbs within the pedestrian priority zone, specifically along Grant Street and Willow Pass Road. Sidewalks across driveways should be set back from the driveway so that they remain level.

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Policy C-3.2: Widen sidewalks within the pedestrian priority zone and provide landscape buffers on connector and transit streets. Sidewalks should generally provide five (5) feet of clear area, although wider (10 to 15 feet) is preferred in some areas that experience high pedestrian volumes, such as Grant Street, connecting the BART station to Todos Santos Plaza. As rights-of-way are constrained by existing buildings, mature trees, and the roadway, it may not be feasible to provide a minimum sidewalk width of 5 feet throughout the Pedestrian Priority zone and the Specific Plan area. In those instances, a reduced sidewalk width of no less than 3 feet is permissible provided there is a passing zone of 5 feet wide by 5 feet long to permit two wheelchair users to pass on another or turnaround at least every 200 feet. The pedestrian clear area needs to be free from obstacles, such as landscaping, tree grates, fire hydrants, vending machines, sign poles, utility boxes, trash cans, transit shelters, and street vendor carts.



The Avenue, Washington DC

Policy C-3.3: Reduce street crossing widths and increase pedestrian visibility by installing bulb-outs and crosswalk markings at intersections on key pedestrian streets where feasible. Installation of bulb-outs at intersections should be considered along the following streets within the pedestrian priority zone:

- Mt. Diablo Street
- Grant Street
- Colfax Street
- East Street
- Salvio Street
- Pacheco Street
- Park Street

Curb extensions or bulb-outs can also be considered for intersections outside of the pedestrian priority zone on a case-by-case basis. The location and design of bulb-outs should consider the types of vehicles that use the roadways on a regular basis, such as frequent deliveries by large trucks that may require a larger turning radius, and therefore, potentially a smaller bulb-out.

Policy C-3.4: Provide pedestrian scale wayfinding throughout the Specific Plan Area.

Policy C-3.5: Provide pedestrian-scale street lighting along all streets in the Plan Area, especially streets with commercial frontage.

Policy C-3.6: When traffic signals are upgraded, provide pedestrian countdown timers.

Central Concord Streetscape Project

As part of the Central Concord Streetscape Project, shown in Fig. 5.12, there are existing streetscape projects already funded. Some of these include way-finder kiosks, new and rehabilitated crosswalks, sidewalks, and Class III bicycle lanes.



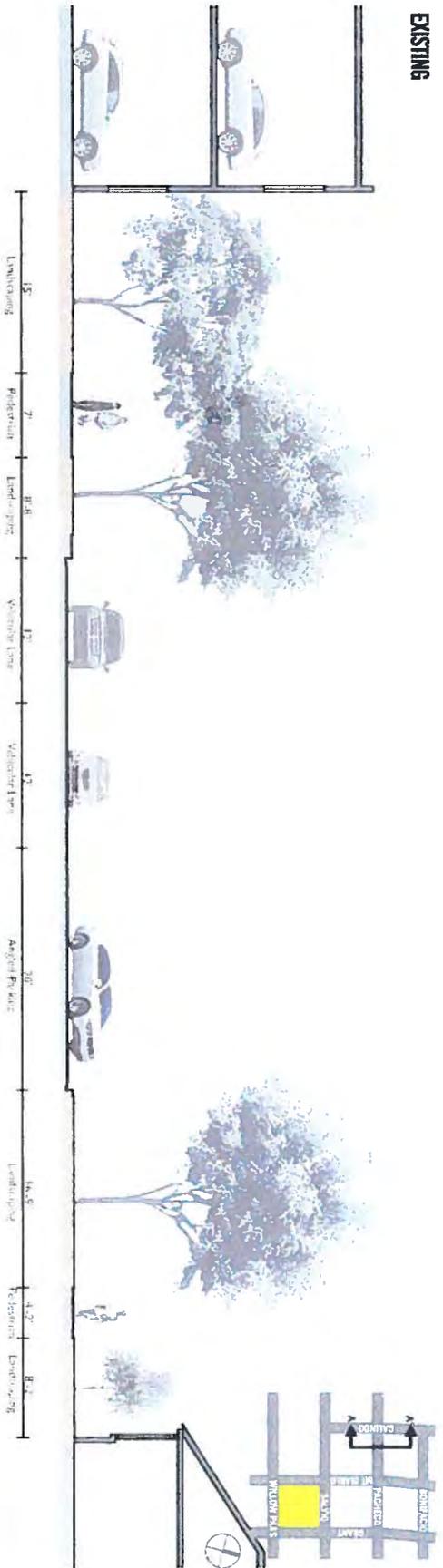
Intersection bulb-out example



Bicycle boulevard and bulb-out, Portland, OR

DOWNTOWN CONCORD SPECIFIC PLAN

EXISTING



POTENTIAL FOR FUTURE EVALUATION

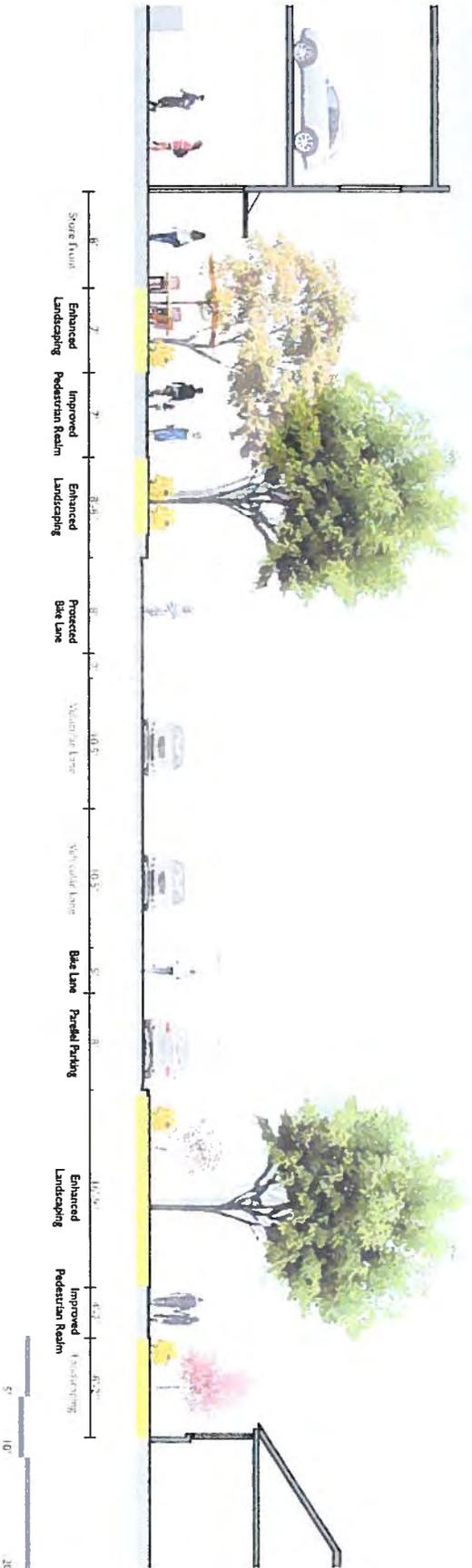


Fig. 5.8 Existing and potential Pacheco Street sections at Galindo Street

EXISTING



POTENTIAL FOR FUTURE EVALUATION

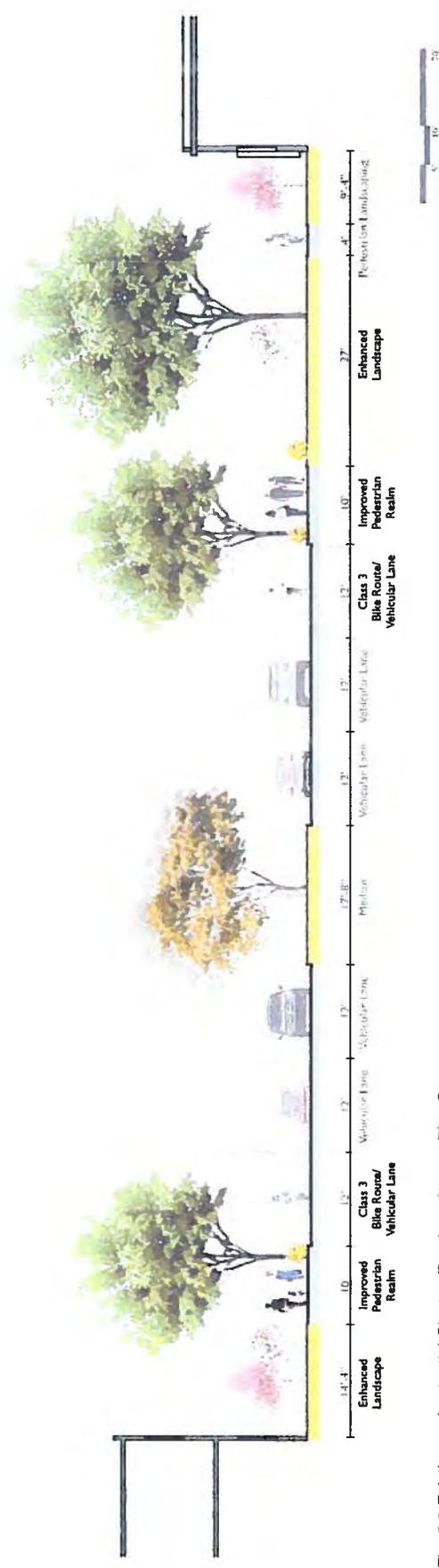


Fig. 5.9 Existing and potential Clayton Road sections at Pine Street



PROPOSED

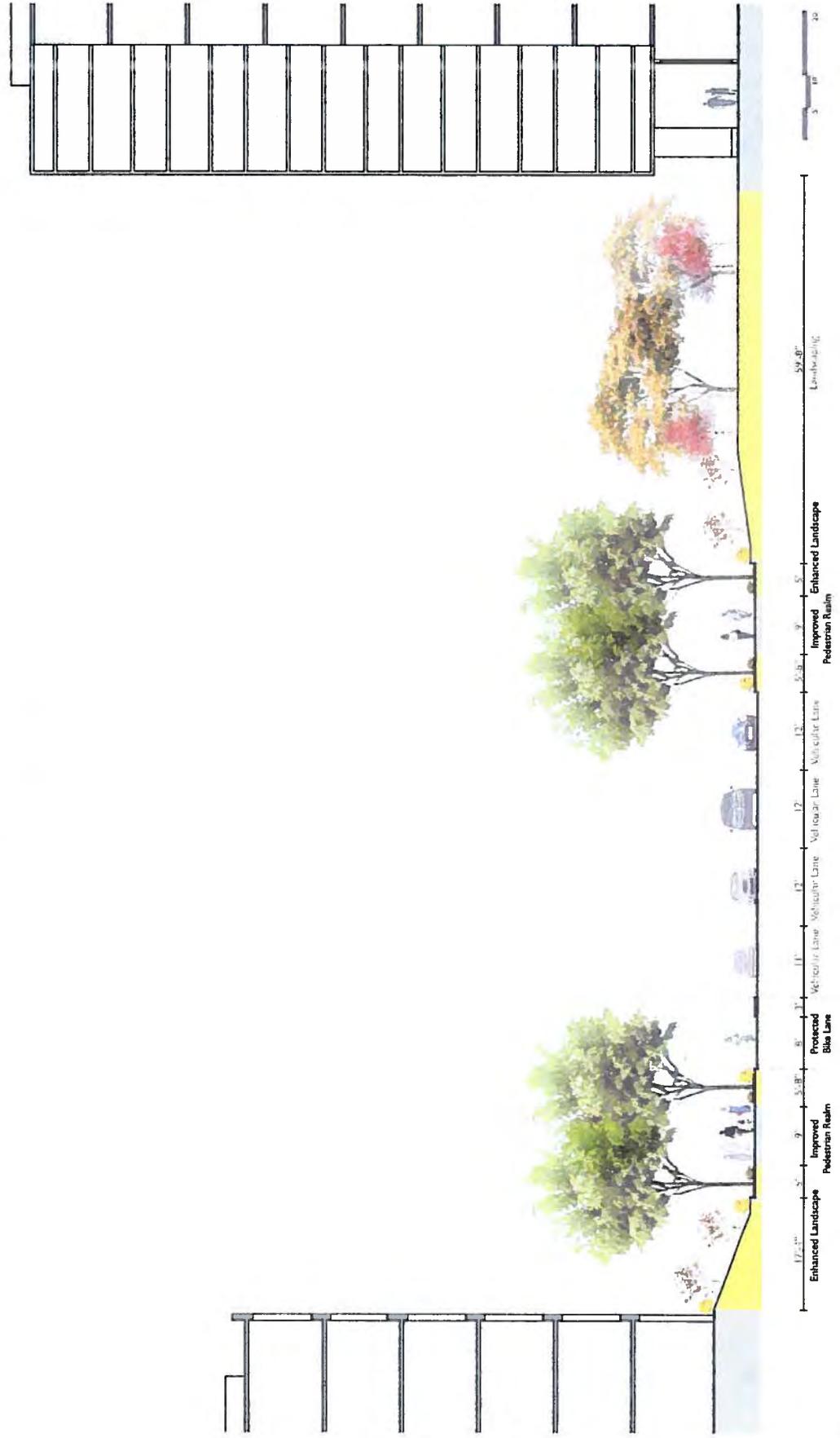


Fig. 5.11 Proposed Clayton Road section at Galindo Street

DOWNTOWN CONCORD SPECIFIC PLAN



-  New Crosswalks
-  Rehabilitated Crosswalks
-  Sidewalk
-  Class III Bicycle Lane
-  Tree Lighting
-  New Traffic Signal
-  Project Boundary

Fig. 5.12 Central Concord Funded Streetscape Project

5.5 BICYCLE CIRCULATION

Concord has an ideal environment for bicycling due to the mild climate, relatively flat terrain and proximity of many recreational and non-recreational destinations. Enhancing and improving bicycle travel for all types and experience levels of cyclists is a key component of the Specific Plan. This section describes proposed enhancements.

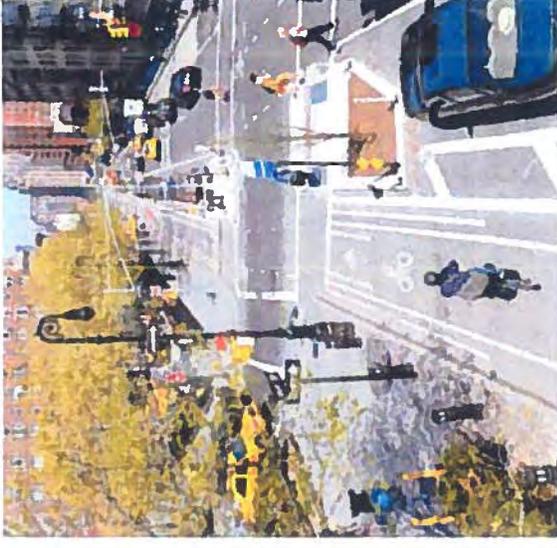
GOAL C-4: A bicycle network with safe and efficient connections to major destinations within the Plan Area and throughout the City of Concord and adjacent communities.

The Concord 2030 General Plan and Concord Trails Master Plan identifies the following bicycle facility types:

- **Class 1 Bicycle Trails** are similar to Caltrans Class I bike paths, offering paved trails that are separated from roadways except at crossings, and may serve multiple users including bicyclists and pedestrians.
- **Class 3B Bike Routes** consist of signed routes with edge lines along collector and arterial streets. Edge lines demark a variable width from 3 to 4 feet for bicycle travel, which is less than the minimum bicycle lane width of 5 feet required to qualify for a Caltrans Class II bike lane designation.
- **Class 3A Bike Facilities** are similar to Caltrans Class III bike routes, consisting of signed routes on residential streets where motor vehicles are expected to share the road with bicyclists; dedicated lanes are not provided



Class I Bicycle Trail, Indianapolis, IN



Bicycle lane buffered with parking, New York, NY



Separated bicycle lane, San Francisco, CA



Class II bicycle lane, Philadelphia, PA

Limited on-street bicycle facilities exist through the downtown area, requiring bicyclists to travel circuitous routes to the downtown area from the BART station, use unsigned routes, or ride on the sidewalks or in travel lanes, as discussed in the Existing Conditions Report. There is also limited bicycle parking throughout the Downtown Area.

The City of Concord plans to develop a Bicycle Master Plan starting early 2014 which will further refine facilities throughout the Downtown area connecting to the entire City. So as not to have conflicting documents, the City's Bicycle Master Plan, when it has been adopted, shall supersede any changes to the bikeway network identified here. Several new bicycle facility types should be considered for inclusion in the City's Bicycle Master Plan:

- Buffered Bike Lanes:** Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Benefits of buffered bike lanes include greater distance between bicyclists and vehicles, provides greater space for bicyclist without making the bike lane appear so wide that it could be mistaken for a parking or travel lane, appeals to a wider cross-section of bicycle riders.
- Bicycle Boulevards:** These are bicycle routes typically on residential or local streets that prioritize through trips for bicyclists. The route appeals to cyclists of varied skill levels by providing direct connections on streets with low traffic volumes. The route reduces delay to bicyclists by assigning right-of-way to travel on the route. Traffic management techniques are generally used as needed to discourage drivers from using the boulevard as a through route. Intersections with major streets are also generally controlled by traffic signals with bicycle actuation. These streets should promote shared use with lower posted speed limits (preferably 25 miles per hour), shared lane bicycle stencils (i.e., "sharrows"), wide curb lanes, and signage.



Bicycle boulevard signage, Emeryville, CA

Potential enhancements to the downtown bicycle network have been developed through the specific plan process, as depicted in Figures 5.13 and 5.14, which include:

- Installation of buffered bike lanes on Concord Boulevard and Clayton Road between Galindo Street and Grant Street
- Addition of Class II bike lanes on Grant Street
- Provision of Class II bike lanes along the majority of the Detroit Avenue corridor (between Clayton Road and Via Del Monte, 0.7 miles) and Class 3 bike routes with sharrows where right of way is constrained (NB between Oakmead Drive and Lynn Avenue; both directions between Via Del Monte and Monument Boulevard; at the NB intersection approach at Clayton Road, 0.2 miles total)
- Installation of Class 3 bicycle route signage/pavement markings on portions of Grant Street and Salvio Street
- Modifications to the unsignalized intersection of Grant Street/Oak Street, adjacent to the BART station area, to a raised intersection with vehicular stop control
- Reconfiguration of Oakland Avenue from four-lanes to three between Mount Diablo Street and Clayton Road with Class II bike lanes in both directions to provide last mile connections to BART



Capital bikeshare, Washington DC

- Designation of Mount Diablo Street from Oakland Avenue to the BART Bus Access Roadway to a Class III route with sharrows to direct bicyclists from the Class I path paralleling Mesa Street to the bike path parallel to the BART Bus Access road, connecting to the BART bike parking area
- Installation of eight additional long-term bicycle parking at the BART station

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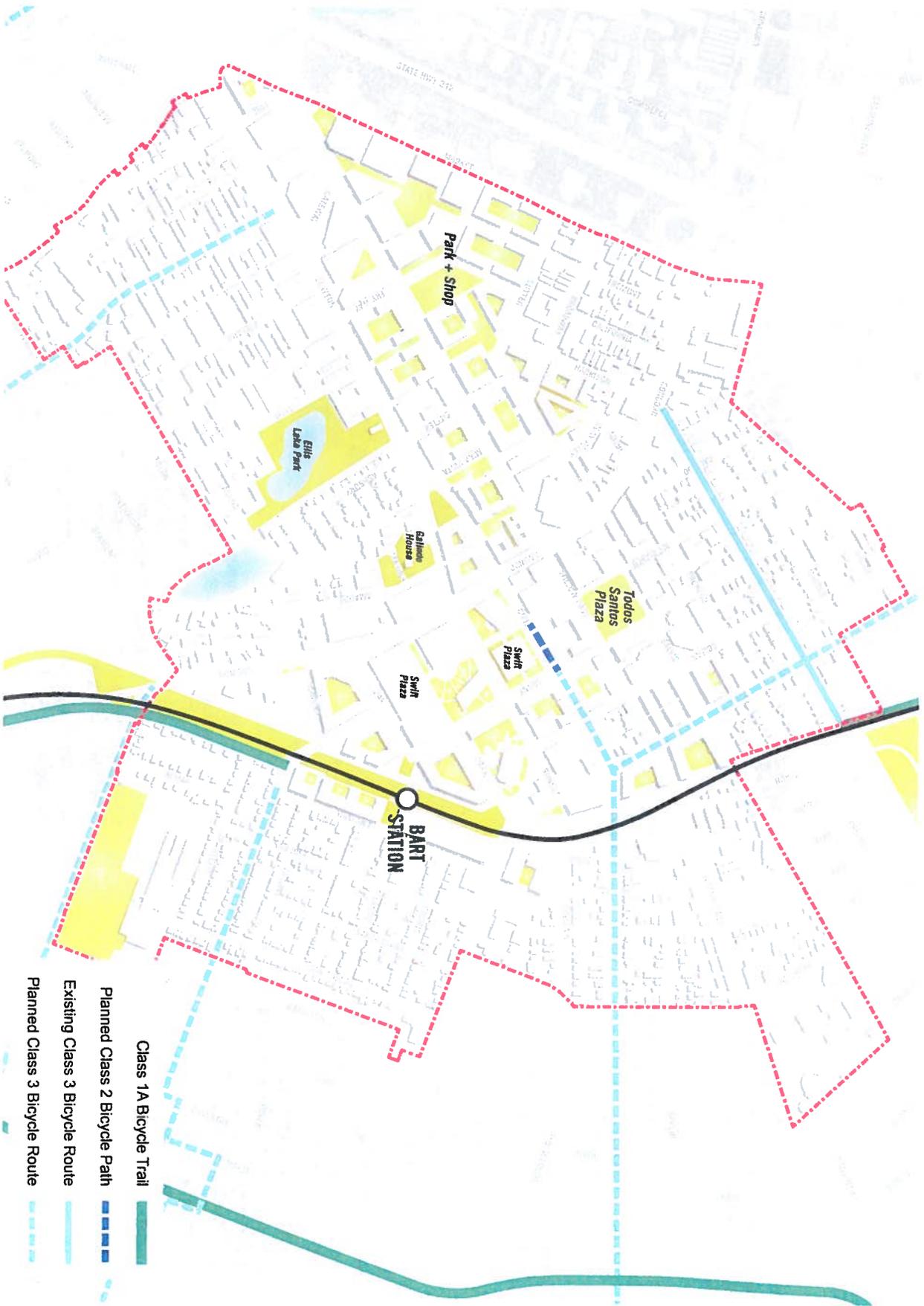


Fig. 5.13 Existing and currently planned bicycle routes

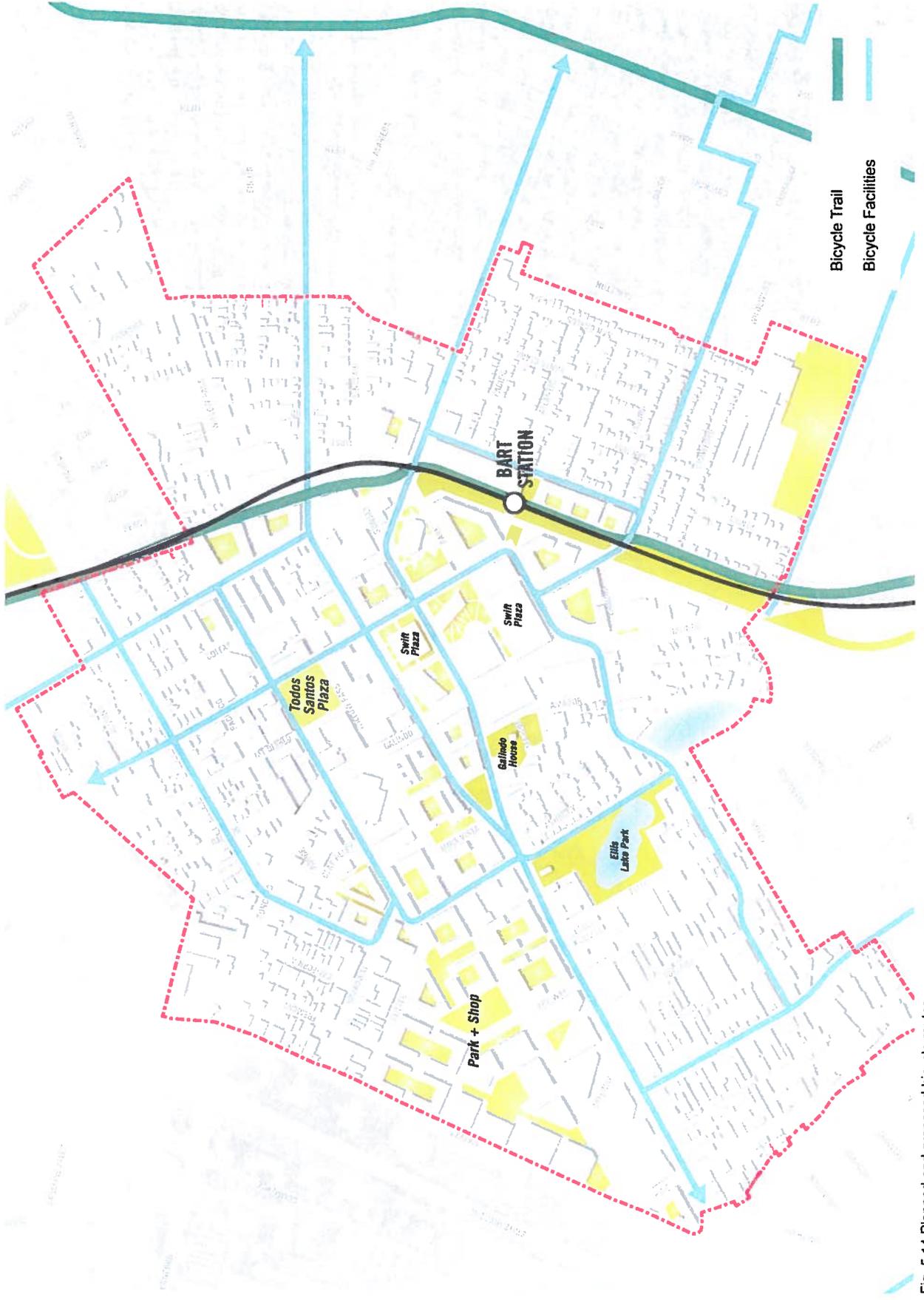


Fig. 5.14 Planned and proposed bicycle routes

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It is anticipated that the final bicycle network would evolve during the preparation of the Bicycle Master Plan and conceptual engineering is completed to determine the feasibility of the routes. Intersection enhancements such as bicycle signal actuation and bicycle boxes at these intersections can reduce potential conflicts between cyclists and motorists by highlighting cyclists' presence and movements for motorists. In addition, providing bicycle actuation at all signals would reduce bicycle travel times and further encourage cycling.

City of Concord Planning Code includes requirements for both long-term (i.e., employees and residents) and short-term (visitors and shoppers) off-street bicycle parking for multi-family and non-residential projects. New developments in the Plan Area will provide off-street bicycle parking based on Code requirements. For areas where redevelopment is not expected to occur in the near-future, short-term bicycle parking, such as bicycle racks, should be provided in the public realm throughout the Plan Area, especially in the non-residential areas. Bicycle racks should be located at places such as pedestrian plazas, intersection bulb-outs, or in on-street bike corrals, where they will not obstruct pedestrian flow on sidewalks and minimize potential conflicts between pedestrians or bicyclists. Bicycles can also provide a key last-mile link in the transportation system, connecting the BART station area to jobs and residences that are not quite in walking distance. A bike share program could be implemented within the plan area.



Bicycle parking integrated with streetscape enhancements

Policy C-4.1: Develop the bicycle network as depicted on Figure 5.4 and further refined as part of the Bicycle Master Plan process. Key highlights proposed as part of the specific plan include buffered bike lanes on a portion of Clayton Road and Concord Boulevard, bicycle boulevards/routes on portions of Harrison Street, Laguna Street, Sutter Street, Bonifacio Street, Salvio Street, and Mt. Diablo Street, and bike lanes on portions of Detroit Avenue, Clayton Road, Concord Boulevard and Grant Street.

Policy C-4.2: Enhance bicycle facilities at key intersections with high bicycle and automobile traffic. Potential changes may include facilities such as bicycle detection and extension of green times and bicycle boxes.

Policy C-4.3: Increase bicycle parking supply in the public realm.

Policy C-4.4: Explore the feasibility of providing a bike share program within the Specific Plan Area.



Bicycle locker and transit station parking examples

5.6 TRANSIT

The study area is served by BART, County Connection (CCCTA), and Tri-Delta Transit. A neighborhood shuttle connecting the Monument Corridor to the BART station and downtown is scheduled to launch in September 2013. BART service provides regional connections to downtown Concord and CCCTA and other transit providers provide more local service. However, many of the bus routes tend to have destinations outside the Specific Plan Area with 30 to 90 minute headways and fares that discourage short trips within the Study Area.

GOAL C-5: Enhanced efficiency and effectiveness of transit in the Plan Area.

To provide increased mobility within and to the Specific Plan Area as land use development occurs, a number of transit enhancements have been identified:

- On designated Transit Streets, bus lanes and queue jump lanes should be investigated when vehicle levels of service approach capacity to provide transit with a travel time advantage over vehicles.
- When traffic signal upgrades occur, transit signal priority shall be considered.
- Provide bus stop amenities, including benches, shelters and real-time arrival data.
- Provide continuous sidewalks that meet Americans with Disability Act standards to bus stops within the Study Area.

- Implement a free downtown circulator shuttle that connects the BART station to various destinations within the downtown area. Potential routes are shown in Figure 5.15. Two routes should be provided on 10 to 15 minute headways. The route could be funded through a business improvement district to which commercial entities would be assessed an annual fee through property taxes. Future study and public input would be required to determine the final route for downtown shuttle system.

Policy C-5.1: Collaborate with CCCTA to improve bus service in the plan area and support Specific Plan objectives by incorporating the following recommendations into its Transit Performance Initiative:

- Move bus stop locations to provide optimum spacing (about 900 to 1,000 feet between stops) that effectively serve the local uses and maintain bus operating speeds
- Locate bus stops on far-side of intersections to improve service times and reduce bus/ auto conflicts at intersections
- Create curb extensions to accommodate in-lane stops that enhance bus service times and provide adequate space for bus stop amenities
- Improve bus stop facilities (shelters, benches, real-time transit arrival displays, route maps/schedules, trash receptacles, etc.) to enhance user experience

- Install Transit Signal Priority (TSP) at signalized intersections along Transit Priority Street to improve bus travel times by prioritizing signal green times for approaching buses.

Policy C-5.2: Evaluate and implement a free local circulator shuttle through the creation of a business improvement district. Some private businesses already provide a shuttle from the BART station to various office buildings within the area, so there is an opportunity to consolidate service while enhancing mobility for larger population. Stops may be more frequent than for CCCTA service.

Policy C-5.3: Coordinating enhancements for all modes of travel in the Plan Area with BART to provide seamless connections to and from the BART Station and the rest of the Specific Plan area.



Concord BART station platform signage

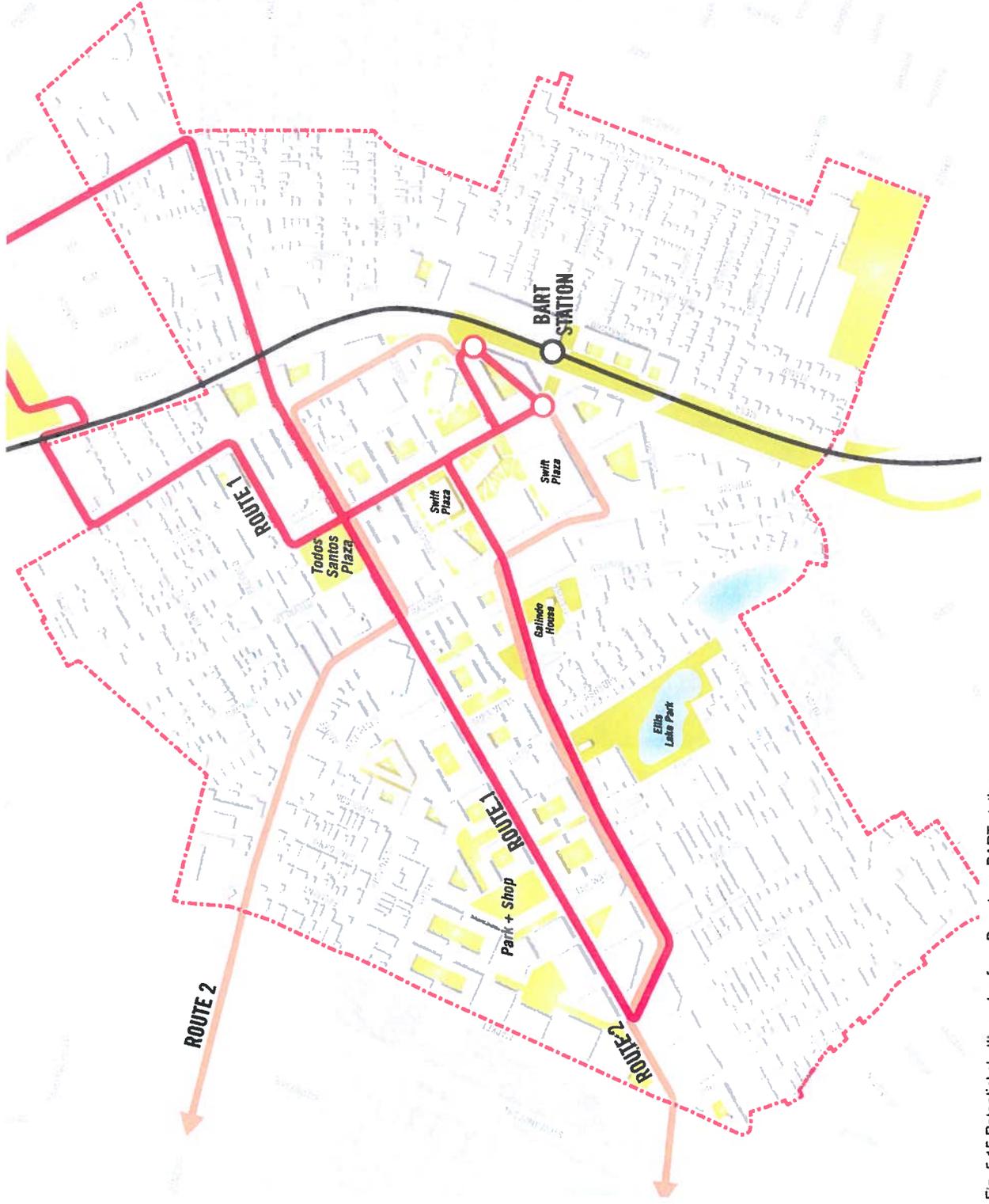


Fig. 5.15 Potential shuttle routes from Downtown BART station

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5.7 ACCESSIBILITY

The goals and policies identified within pedestrian, bicycle and transit sections would improve mobility within the study area for all users, including those with physical disabilities. As the transportation infrastructure is modified, design of facilities within the public right-of-way will meet requirements as set forth by the Americans with Disability Act (ADA). Specific improvements proposed within the Specific Plan are the widening of sidewalks, enhanced street crossings and better wayfinding for pedestrians. Proposed locations of new way finding kiosks in the study area are shown on Figure 5.12. As roadways and intersections are upgraded, the improvements will include replacement of non-ADA compliant features, such as curb ramps and narrow sidewalks.



Wayfinding kiosk examples

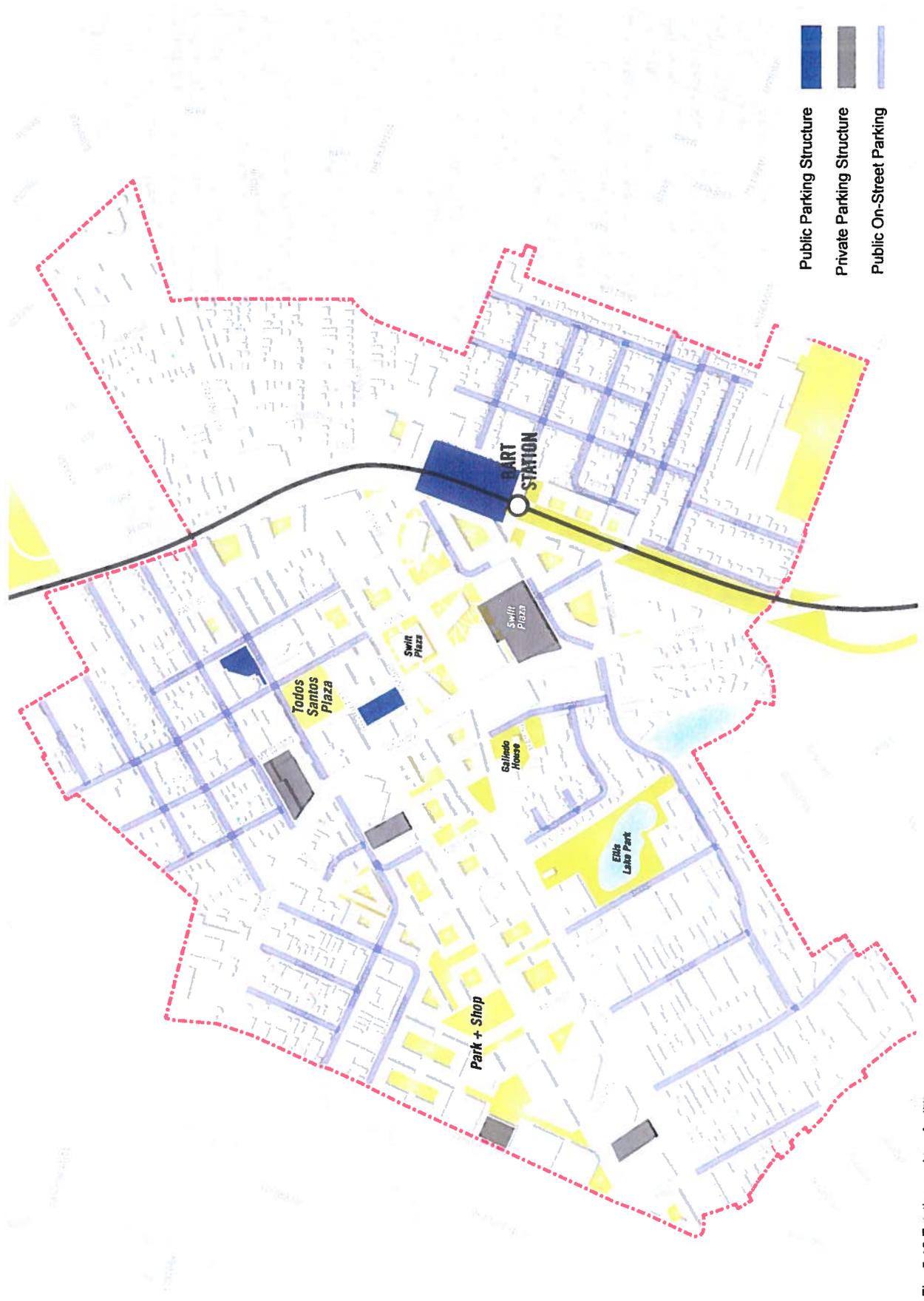


Fig. 5.16 Existing parking facilities

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5.8 PARKING STRATEGY

A variety of parking types are provided within the Specific Plan area, including public on-street and off-street spaces, parking structures, BART parking, both surface and structured, and private parking. A key challenge for the Specific Plan area is providing the appropriate balance of parking. Providing too much parking unnecessarily adds to development costs, wastes valuable land, and further encourages driving; providing inadequate parking may result in excessive circulation by drivers looking for parking, parking spillover into adjacent residential streets, and discourage potential visitors from visiting the Plan Area.

GOAL C-6: A parking supply that supports Downtown businesses and stimulates economic growth, while not promoting excessive driving.

Many new residents are expected to choose to live and potentially work in Downtown Concord because of the potential walkability and quality transit service. Thus, they may not have an automobile and need parking, or may require less parking than a non-downtown development. One of the Specific Plan economic goals is drawing more patrons to the retail and restaurant uses. Many potential visitors may not consider transit as a viable travel mode due to lack of access and/or convenience. The Downtown will also compete with other retail areas in the region that have convenient and/or inexpensive parking, such as downtown Walnut Creek or Sunvalley Mall. Thus, availability and cost of parking may be a key factor for many visitors in deciding to patronize businesses in Downtown Concord.

The City has two public parking structures downtown that provide a significant amount of public parking within the study area. On-street parking and other off-street lots, including numerous private parking garages, are also located within the plan area. The existing parking supply is sufficient to accommodate some redevelopment without the need to provide additional off-street parking supplies. Although a recent study, *Todos Santos Plaza Parking Study, 2012*, concluded that installing meters or charging for parking was not needed based on current conditions as a parking management tool (i.e. to improve parking turnover or reduce illegal overtime parking) because current parking demand is generally met by current on- and off-street supply, this strategy should be evaluated for implementation over the life of the plan in lieu of constructing additional parking garages, or to help fund the construction of new parking facilities.

During special events at Todos Santos Plaza, such as summer concerts, it can be difficult to find an available parking space in close proximity to the Plaza, but these periodic difficulties in finding parking demonstrate the popularity of events in Downtown Concord. Improving way-finding to direct visitors to available parking supplies during special events and development of a special events parking management plan will allow the existing parking supplies in Downtown Concord continue to meet demand.

Overall parking demand is expected to decrease on a per unit basis as the area establishes itself as a destination (i.e., ease of parking is not a primary consideration in the decision to visit) and as transit service to the area becomes more attractive and convenient. Thus, long-term developments could provide fewer parking spaces than developments occurring earlier. The City already provides reduced parking requirements for commercial development within 1/2-mile of a BART station. Similar reductions are not yet in the City Code for residential developments. Table 5-2 shows the parking requirements for commercial and residential development within the plan area, with proposed modifications for residential developments.



Private parking structure adjacent to BART

Table 5.2
Parking Requirements

Land Use	Unit	Transit Overlay District (TOD) ¹	Non-Transit Overlay District ²	Qualifying Affordable Housing Developments ³	Qualifying Affordable Housing Developments (TOD) ³
Multi-Family	Studio	0.75	1.0	0.67	0.5
	1-Bedroom	1.25	1.5	1	0.75
	2-Bedroom	1.5	2.0	1.5	1.0
	3-Bedroom	2.0	2.5	1.75 + 0.5 for each additional bedroom	1.25 + 0.25 for each additional bedroom
Hotel	Per Room	0.75	1.0		
Retail	Per 1,000 sq. ft.	3.0	4.0		
Office	Per 1,000 sq. ft.	2.48	3.33		
Medical Office	Per 1,000 sq. ft.	5.0	5.0		

(1) From Division 3, Section 122-386 for commercial development.

(2) From Division 3, Table 122-385.1

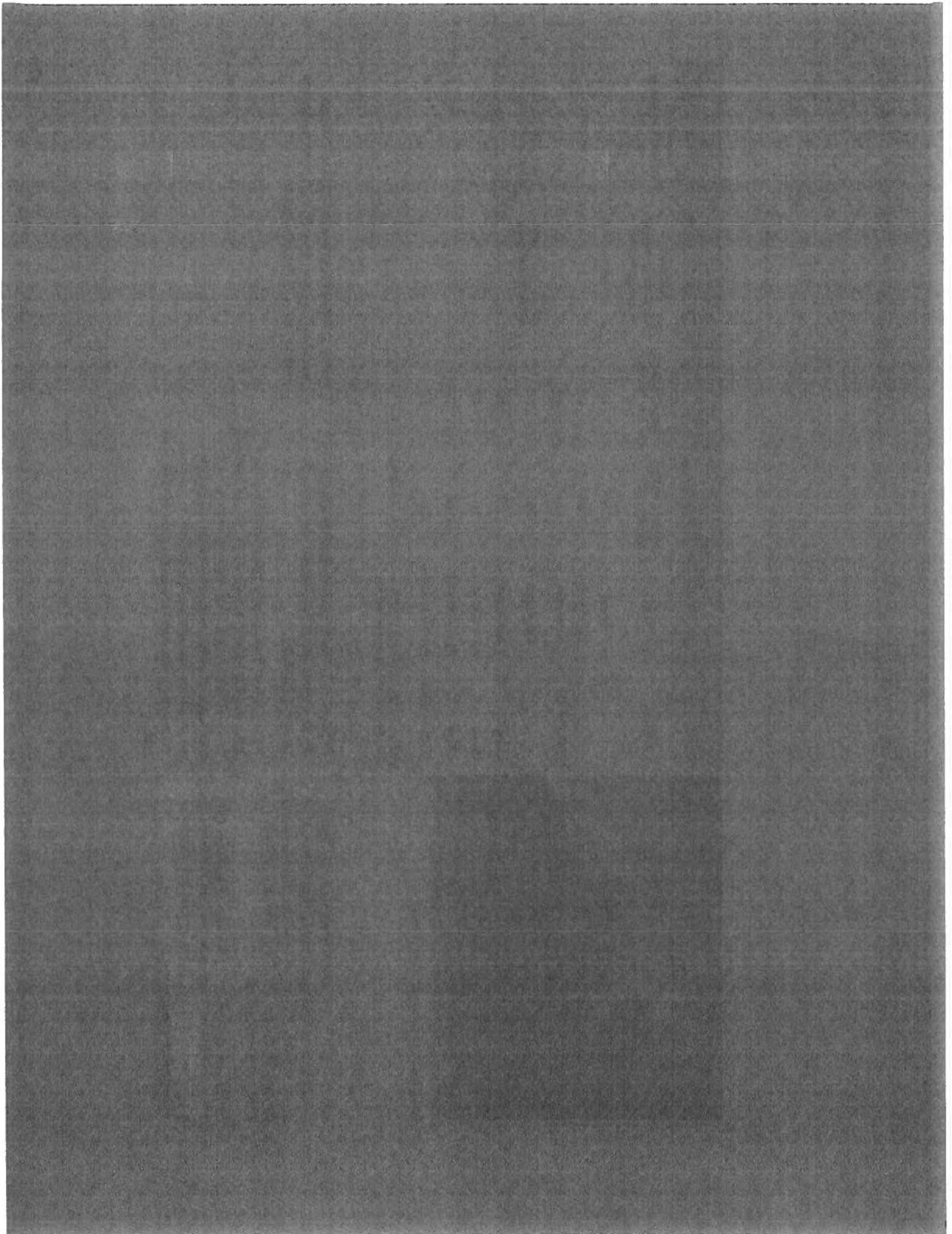
Policy C-6.1: To the extent feasible, encourage private parking entities to allow public parking after typical business hours. Encourage shared parking within each development and between different adjacent developments.

Policy C-6.2: Develop a parking management plan that includes a wayfinding component to encourage a "park once" strategy and a special event parking management strategy.

Policy C-6.3: Modify parking requirements for developments within the Specific Plan area, as shown in Table 5-2.

Policy C-6.4: Evaluate the potential to provide more flexible parking standards to provide flexibility to developers as minimum parking requirements can reduce the feasibility of in-fill developments on small lots, including a requirement to unbundle parking from the purchase/rental price of residential units.

Policy C-6.5: Encourage car sharing to occur throughout the plan area through partnership with zipcar or other car sharing entity.



06 Infrastructure

6.1 CONCLUSIONS + RECOMMENDATIONS FROM EXISTING CONDITIONS REPORT

The Downtown Concord BART Station Planning Area is currently served by existing storm drainage and sanitary sewer conveyance systems that are owned, operated and maintained by the City of Concord. Wastewater treatment infrastructure serving the area is owned, operated, and maintained by Central Contra Costa Sanitary District (CCCSD or Central San). Potable water infrastructure in the area is owned, operated and maintained by the Contra Costa Water District (CCWD), with nearly the entire supply coming from the Sacramento-San Joaquin Delta.

STORM DRAINAGE

The majority of the existing storm drainage infrastructure within the Study Area is currently operating within its design capacity. No parcels within the Study Area have any portion of their properties designated as FEMA Flood Hazard Zones that may be subject to localized flooding during a significant storm event, and no areas of concern have been highlighted by City staff. Contra Costa County Flood Control District does not have any planned infrastructure upgrade projects that would benefit the Study.

The Study Area includes primarily developed parcels. Redevelopment of existing parcels is likely to decrease storm water run-off with the anticipated reduction in impervious area, additional greening,

and compliance with regional and state storm water requirements for water quality and quantity reductions. New development that increases storm water runoff may be subject to Hydrograph Modification requirements to mitigate the additional flow if the increased runoff negatively impacts receiving storm water facilities.

Local storm drainage infrastructure that collect and convey runoff to the major storm drain systems will likely to be reconfigured to accommodate redevelopment. New development may necessitate that storm drainage infrastructure be extended to serve parcels if existing improvements are not currently available. Design will need to comply with City of Concord design standards and specifications and be coordinated with the City. No significant infrastructure deficiency mitigation is anticipated in order to serve the Study Area.

SANITARY SEWER

Sanitary sewer conveyance facilities in the Study Area are currently operating within their designed capacity with no known flow restrictions. Several of the pipes are older and experiencing structural damage, which are included in ongoing annual City projects focused on mitigating these issues, including Phase 2 of the Downtown Sewer and Streetscape Improvements project currently underway. The sewage treatment plant serving the Study Area is currently treating approximately 45 Million Gallons per Day (MGD) of sewage in dry weather, has capacity for up to 54 MGD, and up to 240 MGD in wet weather.

Densification of the Study Area and changes in land use will likely increase sewage generation. The constructed sewer trunk main capacity however takes into consideration this increased density as projected by the General Plan Although local lines may need to be upsized or extended to serve redeveloped parcels, no significant infrastructure deficiency mitigation is anticipated in order to serve the Study Area.

WATER

The existing treatment and conveyance systems for potable water are currently operating within the intended design capacity without any known significant deficiencies. Static water pressures within the Study Area range from approximately 48 psi to 95 psi. The topography of the area is relatively level. Elevations across the pressure subzone containing the Study Area range from 0 to about 110 feet above sea level. Development in the Study Area is not anticipated to require any supplemental booster pumps.

Long term water supply is always a concern; however CCWD's Future Water Supply Study Update (2002) and Urban Water Management Plan (2011) indicate that they are on target with meeting the future demands of their service areas, while accounting for future growth throughout the area. CCWD plans to continue various conservation methods while also continuing to expand their supply and use of recycled water. Future water supply for the Study Area does not appear to be a significant constraint at this time.

DOWNTOWN CONCORD SPECIFIC PLAN

6.2 DISCUSSION AND FINDINGS

In order to document the utility infrastructure anticipated to support the Preferred Land Use Plan, conceptual infrastructure demands for domestic water and sanitary sewer were developed based on the existing land uses and densities. The existing land use areas are summarized in Table 6.1 with the preferred development plan estimates Post-Phase I and Post-Phase II (cumulative) across the study area.

WATER & SEWER

Estimated water demand is determined for each existing land use based on current usage rates. These usage rates do not account for future conservation measures, which may reduce expected demands. Average estimated water consumption rates are shown in Table 6.2 below.

These water consumption rates reflect today's water use levels and do not account for future reduction due to existing conservation laws or any other policies that may come into effect. Applying these water consumption rates to the study area's existing and proposed total land usage, the estimated water demand can be determined. Sewer flows can be estimated as 90% of the water demand. The results are summarized in Table 6.3 below.

The total water and sewer demand, Post-Phase I development, is 50% greater than today's estimated demand for the study area. The Post-Phase II development is 72% greater than the existing demand. The CCWD Urban Water Management Plan (UWMP) from 2011 projects 140% increase over their entire service area by the year 2030, and 149% by 2035. The increases in water demand proposed by this Study are within CCWD's system-wide projections and are not anticipated to have a significant impact on the regional capacity. This level of sewer growth also appears in line with the available capacity of the existing local sewer infrastructure and without significant impact to the capacity at the local sewage treatment facilities.

The estimates for future water and sewer rates shown in this analysis may be considered conservative as they are estimated using today's water demand and not the required 20% demand reduction by the year 2020. Further conservation and sustainability efforts by the City, including higher reliance on recycled water, may mean that future rates can be further reduced. Although the existing local utility infrastructure appears to have sufficient capacity to support the Study, the condition of the existing infrastructure will need to be considered and incorporated into on-going regional replacement strategies.

STORM DRAINAGE

Since current State storm water requirements mandate that new developments or re-developed areas greater than 10,000SF maintain post-construction stormwater flows from the site at pre-construction levels, no significant changes are anticipated for the Study Area. Both qualifying private and public projects will need to mitigate increased storm flows individually to ensure flows generated by the development are not increased. Qualifying developments will also need to meet regional requirements for storm water quality prior to being released from the site. Commonly accepted Best Management Practices (BMPs) include bio-filtration basins, flow-through planters, detention basins, and green roofs.

DRY UTILITIES

In general, regional joint trench utility infrastructure (power, phone, cable and natural gas) is in place within the Study Area. Franchise agreements with the City require these utility providers to supply services to new customers. New construction would likely require new service applications with the applicable utility purveyor in order to re-establish service or provide new services to undeveloped parcels.

SUMMARY

Based on the findings discussed in the existing conditions summary and the projected utility demand calculations, the existing wet utility infrastructure appears to have sufficient capacity to support the Downtown Concord Specific Plan. As the plan does not propose to create new roadways or relocate existing roads, utility infrastructure improvements should be limited to localized connectivity specific to individual development projects. Regional system-wide capacity-related infrastructure upgrades are not anticipated to be needed to implement the Specific Plan. Standard operations and maintenance practices and schedules already in place are expected to accommodate functionality of existing infrastructure.

**Table 6.1
Land Use Area Summary**

	Existing (SF)	Total Post Phase I	Total Post Phase II
Residential	4,250,000	7,297,600	8,319,500
<i>Estimated Residential Units</i>	4,429	7,794	8,429
Retail	1,500,000	1,781,200	2,243,200
Office	2,840,000	3,426,400	4,407,900
Live-Work	0	327,600	385,200
<i>Estimated Live-Work Units</i>	0	250	300

**Table 6.2
Estimated Water Consumption Rates**

Office	Retail	Residential	Live-Work
GPD/SF	GPD/SF	GPD/unit	GPD/unit
0.10	0.28	180	180

**Table 6.3
Estimated Water/Sewer Demand
by Land Use in Gallons/Day**

	Water: Existing	Sanitary: Existing	Water: Post Phase I	Sewer: Post Phase I	Water: Post Phase II	Sewer: Post Phase II
Residential	792,791	713,512	1,368,276	1,231,448	1,458,671	1,312,804
Retail	423,000	380,700	502,298	452,069	632,582	569,324
Office	293,940	264,546	354,632	319,169	456,218	410,596
Live-Work	0	0	44,750	40,275	53,700	48,330
Total:	1,509,731	1,358,758	2,269,957	2,042,961	2,601,171	2,341,054

DOWNTOWN CONCORD SPECIFIC PLAN

6.3 ORDER OF MAGNITUDE COST ESTIMATES

The Study does not anticipate significant costs will be required for utility upgrades within the Study Area given the limited impact on the existing facilities. There are however a number of proposed circulation improvements identified that benefit multi-modal transportation and improve connectivity from the existing BART station through the Downtown area. Proposed improvements include restriping several main roadways to dedicate bike lanes and modification of key intersections to provide bulb-outs and improve pedestrian circulation.

LOCAL CROSSWALK IMPROVEMENTS

Ten existing intersections have been identified for crosswalk upgrades to improve pedestrian circulation in the Downtown Study Area. These intersections identified for additional improvements are at:

1. Willow Pass and Pine
2. Willow Pass and Galindo
3. Adobe and Galindo
4. Salvio and Galindo
5. Laguna and Galindo
6. Grant and Willow Pass
7. Grant and Concord
8. Grant and Clayton
9. Grant and Park
10. Grant and Oak (at BART)

Table 6.4
Estimated Crosswalk Improvement Costs

Local Crosswalk Improvements	Units	Unit Cost	Quantity	Cost
1 Willow Pass & Pine	EA	\$25,000	4	\$100,000
2 Willow Pass & Galindo	EA	\$25,000	4	\$100,000
3 Adobe & Galindo	EA	\$25,000	4	\$100,000
4 Salvio & Galindo	EA	\$25,000	4	\$100,000
5 Laguna & Galindo	EA	\$25,000	4	\$100,000
6 Grant & Willow Pass	EA	\$25,000	4	\$100,000
7 Grant & Concord	EA	\$25,000	4	\$100,000
8 Grant & Clayton	EA	\$25,000	4	\$100,000
9 Grant & Park	EA	\$25,000	4	\$100,000
10 Grant & Oak (@ BART)	EA	\$25,000	4	\$100,000
Local Crosswalk Improvements Subtotal				\$1,000,000
TOTAL CONSTRUCTION COST				\$1,296,750

Costs associated with these improvements were estimated based on generally expected site conditions and reflect industry average construction costs at the time of the analysis. New crosswalks were assumed to be striped, and include in-pavement pedestrian warning lighting systems. Costs associated with land acquisition or private property improvement modifications to facilitate these pedestrian improvements are not included in this study.

PEDESTRIAN AND BICYCLE IMPROVEMENTS

Seven roadway segments through the Downtown study area have been identified for striping improvements to better facilitate a combination of vehicular and bicycle traffic. Restriping costs are assumed to include traffic control, removal of existing striping, slurry sealing of streets and new striping.

Design, Soft Costs, Mapping (@18%) \$175,500
 Inspection,staking, C/A (@10%) \$97,500
 Project Management (@5%) \$48,750

Enhanced pedestrian access routes to the BART Station are also identified in the Study. While the exact nature of the pedestrian improvements has not yet been identified, the costs represented below provide an order of magnitude estimate for planning purposes.

The following roads have been identified for potential striping modifications:

1. Grant Street
2. Pacheco Street
3. Clayton Road
4. Willow Pass Road
5. Salvio Street
6. Concord Boulevard
7. Harrison Street

PUBLIC FACILITY IMPROVEMENTS

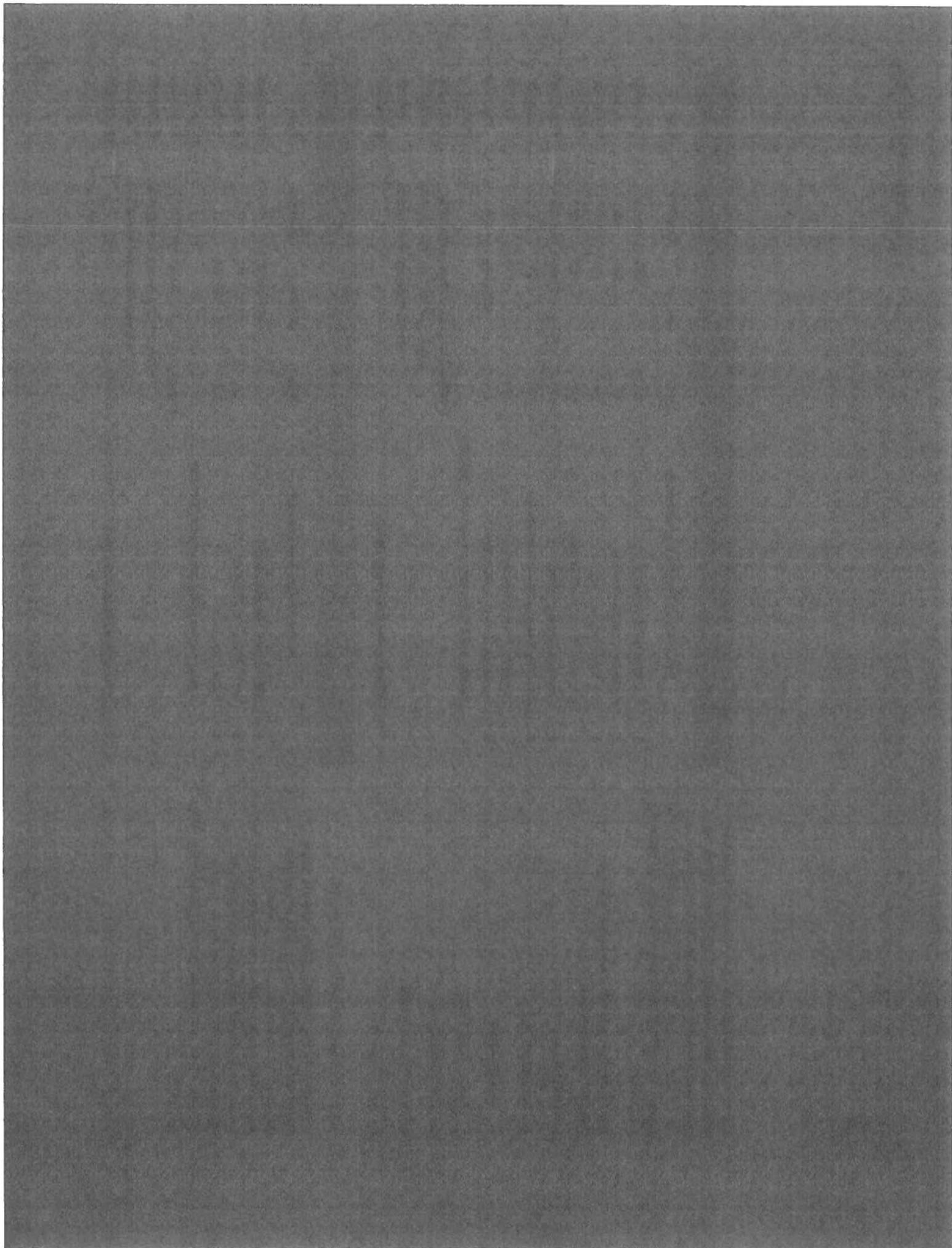
In addition to the corridor improvements listed above, several public plaza areas have been identified for improvement in the preferred plan. While these facilities are not yet defined, assumptions have been made as pedestrian lighting, paving, and landscaping in order to provide "order of magnitude" estimates for planning purposes.

**Table 6.5
Pedestrian & Bicycle Improvement Costs**

	Pedestrian & Bicycle Improvements	Units	Unit Cost	Quantity	Cost
1	Roadway Striping: Grant	LF	\$50	3,400	\$170,000
2	Roadway Striping: Pacheco	LF	\$50	560	\$28,000
3	Roadway Striping: Clayton	LF	\$60	6,500	\$390,000
4	Roadway Striping: Willow Pass	LF	\$60	5,500	\$330,000
5	Roadway Striping: Salvio	LF	\$50	2,900	\$145,000
6	Roadway Striping: Concord Boulevard	LF	\$50	4,000	\$200,000
7	Roadway Striping: Harrison Street	LF	\$50	775	\$38,750
8	Pedestrian Connections to BART	LF	\$500,000	1	\$500,000
	Pedestrian & Bicycle Improvements Subtotal				\$1,801,750
				Design, Soft Costs, Mapping (@18%)	\$324,320
				Inspection, staking, C/A (@10%)	\$180,180
				Project Management (@5%)	\$90,090
	TOTAL CONSTRUCTION COST				\$2,342,280

**Table 6.6
Estimated Public Facility Improvement Costs**

	Public Facility Improvements	Units	Unit Cost	Quantity	Cost
1	BART Plaza: NW of Station	LS	\$7,000,000	1	\$7,000,000
2	BART Plaza: SE of Station	LS	\$7,000,000	1	\$7,000,000
3	Plaza: Clay Alley	LS	\$3,000,000	1	\$3,000,000
	Public Facilities Improvements Subtotal				\$17,000,000
				Design, Soft Costs, Mapping (@18%)	\$3,060,000
				Inspection, staking, C/A (@10%)	\$1,700,000
				Project Management (@5%)	\$850,000
	TOTAL CONSTRUCTION COST				\$22,610,000



07 Implementation Strategies

7.1 OVERVIEW

The following section is a summary of the proposed land use, economic, circulation, and infrastructure proposes and their short, medium, and long-term implementation strategies.

7.2 KEY ACTIONS FOR IMPLEMENTATION

The Specific Plan addresses key actions necessary to implement the Specific Plan, which includes:

- Administration, Processing, and Review of Applications
- Non-conforming Structures and Uses
- Maximum allowable development

ADMINISTRATION, PROCESSING AND REVIEW OF APPLICATIONS

The Specific Plan retains the existing City of Concord Development Code procedures for Administration, processing, and review of applications, in particular the architectural control and Use Permit approval processes.

NON CONFORMING USES AND STRUCTURES

It is not the intent of the Specific Plan to render any existing building or land use to a legal but non-conforming status. Additionally, the Specific Plan may serve to bring some buildings and land uses into conformance that were previously deemed legal but nonconforming. However, it is possible that existing buildings and land uses may be impacted by the changes included in the Specific Plan. To protect existing buildings and land uses, the Zoning Ordinance includes language to provide protection for existing buildings and land uses.

MAXIMUM ALLOWABLE DEVELOPMENT

The Specific Plan establishes the maximum allowable development consistent with the Concord General Plan.

The Specific Plan divides the maximum allowable development between residential and non-residential uses, recognizing the impacts from residential development on schools and parks, while otherwise allowing market forces to determine the final combination of development types over time.

The Community and Economic Development Department of the City of Concord shall at all times maintain a publicly available record of:

- The total amount of allowable residential and non-residential square footage under the Specific Plan
- The total number of residential square footage and non-residential square footage for which entitlements and building permits have been granted
- The total number of residential square footage and non-residential square footage removed due to building demolition
- The total allowable number of residential square footage and non-residential square footage remaining available

The Community and Economic Development Department shall provide the Planning Commission and City Council with yearly informational updates of this record. After the granting of 50% of the total entitlement/square footage allowable under the Specific Plan, the Planning Manager will report to the City Council. The Council will then consider, at that time, to amend the Plan and after completing the required environmental review.

DOWNTOWN CONCORD SPECIFIC PLAN

7.3 ULI TECHNICAL ADVISORY PANEL

The Great Communities Collaborative provided funding to allow the Greenbelt Alliance the opportunity to select a city to be the recipient of an Urban Land Institute Technical Advisory Panel. Greenbelt Alliance, which has participated in both the Downtown Specific Plan and the Housing Element Update currently underway, became aware of the important role that new development will play in realizing the vision embodied in both of these plans and approached the Planning Division with this potential opportunity.

As a result, Downtown Concord was selected as the focus of a 2-day Urban Land Institute (ULI) Technical Advisory Panel (TAP). Staff provided panel members with a comprehensive briefing binder in advance of their visit. On April 24th and 25th, the panel visited Concord for an intensive work session examining Downtown Concord, touring the Downtown PDA area, meeting with staff, meeting with stakeholders, and then participating in a concentrated study session/charrette. In the early evening, the panel will roll up their sleeves to summarize their observations and begin developing strategies. The next day they continue working on the recommendations and incorporate them into a presentation. The presentation is scheduled for 1pm in the City Council Chambers on Friday, April 25th.

The panel members for Concord consisted of seasoned professionals with experience in real estate, commercial brokerage, planning, architecture, and developing financing, and included: economist Alan Billingsley; Will Fleissig, President with Communitas Development, Inc.; Chris Haegglund, Principal with BAR Architects; Kathleen Livermore, contract planner with City of Alameda; Cameron Mueller, Urban & Environmental Planner with AECOM; Anu Natarajan, City of Fremont Council Member; Paul Ring, Vice President of Development with Core Companies; and Jeff Turnlin, Principal with Nelson Nygaard Transportation Planners. The ULI presentation held in the Council Chambers was open to the public, and approximately 30 people were in attendance. City staff video-taped the session for future viewing by the public.

The ULI panel studied what could be done to encourage new development in Downtown, and how Concord can position itself to take advantage of its many positive attributes which include generous land use entitlements, a young and diverse population, and a strategic location served by three highways and two BART stations, among many other assets.

Based on their April 25th presentation, the ULI Panel's recommendations are shown below. The recommendations as noted during the ULI presentation were those strategies requiring immediate implementation. Staff found the presentation very helpful, in that it provided external confirmation of the need for immediate action on a number of the Downtown Plan's implementation strategies. Staff reviewed the ULI recommendations and determined that almost all of them are currently incorporated within the Downtown Plan (Chapter 7). Each of the ULI recommendations are shown below with the relevant Downtown implementation strategies that relate to each.

During the DSC's most recent meeting on April 28th, the DSC expressed excitement and satisfaction that much of the ULI discussion was in agreement with the recent discussions of the DSC and supported those strategies noted for immediate action. As a result, staff has pulled those strategies noted for Immediate Action into the table below, as requiring the City's immediate focus. In addition, staff has incorporated one additional implementation strategy for inclusion in the Downtown Plan T-1 G "Re-examine signal timing on through streets, especially during mid-day pedestrian travels," as shown within the Implementation Action charts that follow this table.

**Implementation Action:
Immediate/First Small Moves**

1. Define and Brand Downtown

- Push BART to get Station way-finding concept plan to better connect neighborhoods and Downtown districts
- Integrate Art
- New Downtown graphic

2. Improve access and orientation for auto drivers, pedestrians, and bicyclists

- Re-examine signal timing on through streets, especially during mid-day
- Fill in deficient/missing sidewalks
- Provide pedestrian access to Park and Shop off Salvia Street
- Demonstration bike lanes and connections as economic development – Concord Blvd.

3. Form Parking Downtown Improvement District managed by Downtown associations

- Leverage ample existing parking spaces
- Offer shuttles with 15 minute headways; linked destinations between BART Station, Todos Santos Plaza, John Muir Medical Center, and Diablo Valley College
- Ombudsman for homeless population

4. Increase activity and destinations in downtown

- Curate pop-up retail program with short-term leases near Swift Plaza at Grant St.
- Retail kiosk
- Target new unique restaurants – i.e., Hop Grenade, Pig and Pickle
- Add more programming in park

5. Locate Justice Center to existing vacant buildings near Police station*

- *Don't wait for new structure on redevelopment parcel

**Implementation Action
Short-term Strategies**

LU-3 D

Pedestrian priorities

- ED-4 A
- ED-6 D
- T-1 B, C, G
- I-1 A
- I-2 G
- Focus on activating Grant through coffee carts, outdoor seating, kiosk retail
- Allow pedestrians to walk down Grant without having to push button to cross street
- Accommodate pedestrian crossings in all signal phases in Specific Plan areas, at least during daytime.

Bicycle Priorities

Bike Paths

- I-2 A, B, C, E
- I-2 F, K
- T-1 E
- T-4 G
- Concord Blvd fm Oakland to Detroit
- Clayton Rd and Sunset fm Detroit to Concord Blvd
- Detroit Ave fm Concord to Contra Costa Canal Trail Spur
- Salvia Street fm Port Chicago Highway Path to Olivera Rd. and Reuse Project
- Grant Street from BART station to Willow Pass Rd
- Port Chicago from Salvia to Sunset
- Contra Costa Canal Trail to Detroit Ave
- BART right of way from Systron Dr. to BART Station to Port Chicago Highway path

Neighborhood Greenways

- Oak and Laguna between Detroit and BART station
- Salvia Street from Port Chicago to Fry's

Roadway Priorities

- T-1 F
- T-2 A, B
- Re-time signals for quicker cycle and better progression
- Convert Grant and Mt. Diablo to two-way between Concord and Salvia St.
- Adopt NACTO Urban Street Design Guide for use on all streets
- Eliminate LOS thresholds for downtown environmental analysis
- Extend Salvia to Fry – Long term strategy

Parking Priorities

- T-3 B
- ED-1 E, I
- ED-2 C, G
- F-1 D
- Allow off-site parking arrangements to meet any commercial parking requirements administratively.
- Delegate authority to Downtown Todos Santos Business Association management of parking.
- Lease surplus parking from private owners and make available to public.
- Valet parking for Thursday evening peak.
- Install parking way-finding and real-time availability information. – Long term strategy

T-4 E, F

Station Priorities

- I-1 A, B
- I-2 F, G
- Partner with BART to get Concord Station prioritized in upcoming round of major station improvements
- Prioritize pedestrian arrival at Grant St.

Transit Priorities

- T-1 A
- F-1 A, F
- Partner with Diablo Valley College, John Muir Medical Center, Todos Santos Business Association and County Connection to rebrand and improve frequency on Line 20. Run every 15 minutes all day to match BART schedule. (Free, Every 10-15 minutes, Branded to Concord/Operated by County Connection).
- Consider rerouting Line 314 between John Muir Medical Center, Concord BART and Pleasant Hill BART via Monument Blvd. and improve headway to match BART schedule.

LRPMP

DOWNTOWN CONCORD SPECIFIC PLAN

7.4 IMPLEMENTATION MATRIX

Implementation Action	Term			Responsible Department	Potential Partners	Proposed Indicator	Applicability	Notes/ Comments
	Short 2014	Med 2017	Long 2022					
LAND USE PLAN (LU)								
LU-1 Adopt the Downtown Vision Plan, Implementation Strategy, and Regulating Code								
A. Incorporate the Downtown Plan into the General Plan Updater/Housing Element Update	X			CED		App. by Oct 2014	All	during Housing Element Update
B. Prepare and Adopt Addendum for the Vision Plan, Regulating Code, and Implementation Strategy	X			CED		App. by Oct. 2014	All	as part of SP project
C. Amend Development Code & other City Ordinances, as necessary to insure consistency with the Regulating Code.	X			CED		App. by Oct 2014	All	
LU-2 Examine Height and Incentive bonuses								
A. Define areas where additional height would be beneficial	X			CED		Oct 2014	Land Use	beyond current DP zoning
B. Develop code sections to recognize certain thresholds: up to 5 stories, 12 stories, over 12 stories		X	X	CED		by 2020	Land Use	
C. Provide FAR/Density bonus for desirable amenities provided (open space, day care facilities, employment, 3-br units, gardens, etc) (See Emeryville, San Diego, and Portland programs)	X			CED			Land Use	
D. Study modification of Development Code to allow multi-family units w/just design review (within 1/2-mile radius of BART)	X			CED				
E. Consider parking reduction as incentive for first two initial projects within the downtown of at least 100 units	X							

CED = COMMUNITY & ECONOMIC DEVELOPMENT, PWD = PUBLIC WORKS DEPARTMENT

07 IMPLEMENTATION STRATEGIES

Implementation Action		Term			Responsible Department	Potential Partners	Proposed Indicator	Applicability	Notes/Comments
Short 2014	Med 2017	Long 2022							
LAND USE PLAN (LU)									
LU-3 Urban Design and Development									
A.	Focus primarily on vacant/underutilized parcels w/in transit overlay	X			CED		Oct. 2014	Land Use	1/2 mile of BART
B.	Define a new district around Pacheco, Adobe and Clay's Alley (restaurants, artisanal local retailers).	X	X	X	CED	C		Land Use	
C.	Develop Grant St. as Vital Commercial link from TSP through to BART through use of developer incentives (tbd)	X	X		CED	BART		Land Use	
D.	Study Redevelopment of Park and Shop area			X	CED	Land Owners			
E.	Work with community groups/hold meetings at different locations to generate more community input	X	X		CED				
HOUSING (H)									
H-1 Housing									
A.	Provide a greater diversity of housing types including market rate and affordable apts., condos, townhomes.		X		CED	CED		Residential	
B.	Monitor affordability within project area	X	X		CED	Land Owners	2022	Residential	
C.	Maintain City's affordable units currently under Regulatory Agreement within project area at 90% of current level to 2022, as financially feasible	X	X		CED	Land Owners	2022	Residential	
D.	Develop Anti-Displacement strategies for Inclusion in Housing Element	X	X		CED	Land Owners	Oct. 2014	Residential	
E.	Monitor conditions of affordable units within City's inventory	X	X		CED	Land Owners			
F.	Examine updates to Secondary Living Unit ordinance to provide affordability and greater flexibility within the Transit Overlay Zone	X							
G.	Coordinate meeting with Contra Costa Water District to explore reductions to fees and requirements by the District for Secondary Living Units	X							

CED = COMMUNITY & ECONOMIC DEVELOPMENT, PWD = PUBLIC WORKS DEPARTMENT

DOWNTOWN CONCORD SPECIFIC PLAN

Implementation Action	Term			Responsible Department	Potential Partners	Proposed Indicator	Applicability	Notes/Comments
	Short 2014	Med 2017	Long 2022					
ECONOMIC VITALITY (ED)								
ED-1 Engage Community Strategically for Downtown Redevelopment/Development								
A. Create, distribute, and market the Downtown Concord Vision Poster and Outreach Campaign	X			CED		Oct 2015	Retail	for Todos Santos District
B. Develop Branding Program for Todos Santos District	X			CED		Oct 2015	Retail	
C. Develop a Marketing Plan to: Engage business owners; market properties; and provide info. on Dev. Incentives	X			CED		Oct 2015	Retail	
D. Engage Property Owners to gain an Understanding of City's goal of branding of Todos Santos District	X			CED		Oct 2015	Retail	
E. Re-Examine Creation of and Market Support for Property-Based Improvement District	X			CED		Oct 2015	Retail	
F. Prepare Long-term Property Management Plan for submittal to the State for City's prior Redevelopment sites	X			CED	St. Dept. of Finance	May 2014	Retail	
G. Identify target businesses, based on market demand, to attract to the Downtown Specific Plan Area. Plan & Implement	X			CED		4 new bus./yr	Retail	
H. Seek Grants and Other funding sources for improvements/activities	X			CED	ABAG/MTC		Retail	
I. Expand existing Economic Development Program to Retain and Support existing businesses/offices within Downtown	X			CED		Continuous	Retail	
ED-2 Support Development/Redevelopment of Downtown Properties								
A. Re-initiate facade improvement program with City supporting design, development and expedited permitting	X			CED	TSBA/ Chamber	Oct 2015	Retail	Fund Previous Program
B. Prepare Design Guidelines handout for Developers (except from SP)	X			CED			Land Use	
C. Encourage and facilitate a Parking Management Program in the DP zoned area and south to BART		X		CED			Retail	
D. Examine Timed Parking for on-street parking in DP zoned Area to encourage parking turnover		X		CED	TSBA/ Chamber			
E. Establish Design Parameters for Successful/flexible retail (guidelines) for mixed use projects	X	X		CED		Oct. 2015	Retail	
F. Re-examine Development Code for retail requirements within mixed use projects.	X			CED		Oct. 2015		Inclusion in Dev. Code Amendment
G. Re-Examine and Coordinate Procedures and Fees for In-lieu Parking Fee Program.	X			CED				Re-examine fee

CED = COMMUNITY & ECONOMIC DEVELOPMENT, PWD = PUBLIC WORKS DEPARTMENT

07 IMPLEMENTATION STRATEGIES

Implementation Action		Short 2014	Med 2017	Long 2022	Responsible Department	Potential Partners	Proposed Indicator	Applicability
ECONOMIC VITALITY (ED), cont.								
ED-3	Initiate Catalyst Development Projects/Leverage Public Land							
A.	Use Successor Agency opportunity sites as catalyst development sites to incentivize developers w/ First-In Incentive Package	X			CED			Land Use
B.	Select a developer for the 4.22 acre Oak St site through a RFQ, RFP process w/the necessary experience & expertise to complete a high density mixed-use development in a realistic timeframe & negotiate a Disposition & Development Agreement w/that developer	X			CED	BART		Land Use
C.	Post Oak St site, select a developer for the 3-acre Galindo St site through a RFQ, RFP process w/the necessary experience & expertise to complete a high density mixed-use development in a realistic timeframe & negotiate a Disposition & Development Agreement w/that developer		X		CED			Land Use
D.	Establish cost/feasibility of promoting fee reduction or fixed impact fees for two key sites to incentivize developers at catalyst sites	X			CED			ALL
ED-4	Encourage and facilitate development of other infill sites in Todos Santos District							
A.	Encourage development of Grant Street sites	X	X		CED	BART		
B.	Encourage development of key opportunity sites in Transit Overlay of Todos Santos District	X	X		CED	BART		Land Use
C.	Develop Inventory and tracking of retail businesses; Definition and tracking of Successful Performing Retail	X	X		CED			Retail
D.	Coordinate with BART on property adjacent to Successor Agency-owned parcels to create complimentary disposition processes	X			CED	BART		
ED-5	Develop Plan for Marketing Strategic Sites to Developers							
A.	Host Second Developer Panel on Implementation and Marketing of Sites	X			CED			Land Use
B.	Effective targeting and reaching out to desirable developers with successful regional track record	X	X		CED			Land Use
C.	Clearly articulate entitlement streamlining achieved through Specific Plan in marketing approach to developers	X			CED			Land Use
ED-6	Program Quick Wins as Possible for Downtown							
A.	Prepare Request for Proposals to Engage Mural Artwork on utility structures	X			CED			Land Use
B.	Host Chalk Art Contest in coordination w/Music & Market or Downtown Events	X			CED			Land Use
C.	Prepare Process and Procedures for Parklet Design Development similar to Sidewalk Café Permit	X			CED	TSBA/ Chamber		Land Use
D.	Coordinate/Facilitate Monthly Vendor Event along Grant St. betw. WPR and BART	X			CED	TSBA/ Chamber		Land Use
E.	Promote existing downtown historic walking tour, Galindo House, Concord Historical Museum & Research Center and key historic properties (example: Todos Santos Days event)	X			CED	Historical Society		Land Use

CED = COMMUNITY & ECONOMIC DEVELOPMENT, PWD = PUBLIC WORKS DEPARTMENT

DOWNTOWN CONCORD SPECIFIC PLAN

Implementation Action		Term	Responsible Department	Potential Partners	Proposed Indicator	Applicability	Notes/Comments
		Short 2014	Med 2017	Long 2022			
TRANSPORTATION (T)							
T-1	Optimize Circulation for Residents and Employees	X	X		8 routes or trips per day to start	TRANSIT	
A.	Establish Free Downtown Circulator Shuttle to address first mile/last mile concerns with expanded use of BART through development of PBID			County Connection			
B.	Use Public Land to Create Interesting pedestrian places, e.g., public seating, "pop up" retail/event space, etc.			CCCTA			temporary installations
C.	Program streetscape furnishing improvements on key corridors						
D.	Provide Downtown Concord bike share program						
E.	Where possible, promote connectivity between Downtown & the Iron Horse Trail, as well the Contra Costa Canal Trail	X	X				
F.	Study conversion of one-way streets to two-way streets to increase accessibility to retail and downtown navigation		X				
G.	Re-examine signal timing on through streets, especially during mid-day pedestrian travels						
T-2	Develop transportation impact study guidelines that establish alternative metrics for evaluating transportation system	X	X		Reduced travel times & VMT	TRAFFIC, TRANSIT, PARKING	
A.	Corridor travel time as opposed to isolated intersection operations			County Connection			
B.	Adopt street designation overlay to establish modal priorities			CCTA			
T-3	Improve Parking Strategies				VMT reductions, x# parking spaces provided below baseline		
A.	Study reduced parking requirements to residential units within ½ mile of BART	X					RESIDENTIAL, RETAIL, COMMERCIAL, PARKING
B.	Evaluate flexible parking standards – i.e. City of Emeryville range of required parking (33% less than expected demand -10% more than predicated demand for commercial uses).	X	X				
C.	Work with car sharing entities to: 1) locate cars within the downtown project area; 2) make downtown residents/employees aware of the opportunities through annual coordination meetings with providers and 3) establishing guidelines for new projects to provide car sharing spaces	X	X	BART			

CED = COMMUNITY & ECONOMIC DEVELOPMENT, PWD = PUBLIC WORKS DEPARTMENT

07 IMPLEMENTATION STRATEGIES

Implementation Action		Term		Responsible Department	Potential Partners	Proposed Indicator	Applicability	Notes/Comments
Short 2014	Med 2017	Long 2022						
TRANSPORTATION (T)								
T-3 (cont.) Improve Parking Strategies								
CED VMT reductions, x# parking spaces provided below baseline								
D.	Require parking be unbundled from rent or sales price in residential developments	X						
E.	Further study charging market rate for public parking in the downtown area, implement companion parking technologies (pay by cell phone, etc.) & parking informational brochure, website, wayfinding signs. Bi-annually monitor availability of street parking in the Downtown Pedestrian (DP) zoning district to track impact of new development and set goal of ensuring availability (e.g. 10-15%). As availability reduces over time re-examine preparation of parking study for potential addition of meters.		X					
F.	Return parking revenue to the area by establishing Parking District; could be used to fund free shuttle & improve pedestrian/cycling conditions including signage and wayfinding		X					
G.	City will consider a parking reduction of up to 25% for any projects providing the following strategies within the Downtown Specific Plan Area: 1) free (bus) transit passes for residents/employees; 2) car sharing memberships & location of on-site parking space for a car sharing vehicle 3) unbundled parking					X		
H.	Further study a modification to City's parking ordinance to allow flexibility for new housing developments, whereby, the property owner shall provide at no cost to every employee and/or residential unit for X years from certificate of occupancy: 1) a pass for unlimited local bus transit service; or 2) a functionally equivalent transit benefit in an amount at least equal to the price of a non-discounted, unlimited monthly local bus pass, to be approved by the Planning Manager or specified within conditions of approval, as appropriate					X		
I.	Further examine Development Code Section 122-386(g) to allow greater flexibility under (g) Adjustments to Parking Requirements to discourage excess parking in proximity to transit stations					X		

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DOWNTOWN CONCORD SPECIFIC PLAN

Implementation Action	Term	Responsible Department	Potential Partners	Proposed Indicator	Applicability	Notes/Comments
	Short 2014	Med 2017	Long 2022			
TRANSPORTATION (T)						
T-4 Optimize Coordination with BART						
A. Engage BART to streamline development and expedite approval processes	X	X	X	CED, PWD	BART	BART land fully developed by 20xx RESIDENTIAL, COMMERCIAL, RETAIL
B. Explore how the City could convene stakeholders and facilitate the above process					TSBA, Prop. Own	
C. Develop interim parking strategy and optimizing parking lots						
D. Explore potential for BART corridor overlay zoning	X	X		CED, PWD	BART	TRAFFIC, TRANSIT, PARKING subset of Transit Overlay? connecting to Grant St
E. Coordinate with BART on way-finding program	X			CED	BART	
F. Coordinate with BART on Concord Station Improvements	X				BART	
G. Prepare focused transportation studies on site access/circulation	X	X				as determined necessary
INFRASTRUCTURE (I)						
I-1 Program Grant Street Improvements						
A. Design Streetscape, Landscape and Lighting Improvements from BART to Todos Santos; Define Cost Estimate	X	X	X	CED		
B. Implement Public Art at Key Locations	X	X		CED		
I-2 Program Pedestrian and Bicycle Plan Improvements						
A. Design Green Framework path within Downtown Specific Plan	X			CED, PARKS		
B. Coordinate with Construction of OBAG Last Mile and Detroit Avenue projects	X			CED, PWD	CCTA	
C. Coordinate with BART on potential for connection of North Concord BART trail with trail west of Concord BART	X			CED, PWD	BART	
D. Install Fence and Entry Arches along south side of Todos Santos Plaza	X			CED, PWD		
E. Program for On-street Pedestrian and Bicycle facility improvements and incorporate with Bicycle Master Plan	X	X		CED, PWD		

CEd = COMMUNITY & ECONOMIC DEVELOPMENT, PWD = PUBLIC WORKS DEPARTMENT

07 IMPLEMENTATION STRATEGIES

Implementation Action		Short 2014	Med 2017	Long 2022	Responsible Department	Potential Partners	Proposed Indicator	Applicability	Notes/Comments
INFRASTRUCTURE (I)									
I-2	Program Pedestrian and Bicycle Plan Improvements (cont.)								
F.	Enhance Streetscape on Key streets linking Major Destinations				CED, PWD				Salvio, Grant, Willow Pass
G.	Create enhanced pedestrian crossings at key locations: Concord Ave., Galindo St., Willow Pass Road		X		CED, PWD				
I.	Examine modifying Section 122-393 Bicycle Parking within next Development Code Amendment to link bicycle parking requirement to number of units, rather than number of spaces.								
J.	Submit application to become a 'Platinum Bike City' by 2020		X	X					
K.	Retain consultant for preparation of Bicycle Master Plan	X							
DESIGN GUIDELINES (F)									
A.	Hold Study Session with DRB to explore Early California theme	X			CED	DRB	Oct. 2013		
B.	Prepare Design Guidelines handout for Developers (excerpt from SP)	X			CED		Oct. 2014		
FUNDING PROGRAMS (F)									
F-1	Investigate Funding Sources and Availability								
A.	Evaluate Tax Increment Financing (TIF) districts and Urban Transportation Districts (UTDs) that can provide financing for facilities, roads, and transportation enhancements within the project area	X	X	X	CED, PWD			INFRASTRUCTURE	x\$\$ invested by 2020, y\$\$ by 2030
B.	Study Potential for Transfer of development rights		X	X	CED				x# Deals brokered
C.	Investigate feasibility of a Benefit Assessment District or other funding mechanisms								
D.	Establish Property-based Improvement District (PBID)	X	X		CED	TSBA			
E.	Explore private/public partnerships for neighborhood revitalization projects	X			CED				
F.	Apply for PDA Implementation grants, as available	X			CED	ABAG/MTC			
G.	Program necessary infrastructure projects for Downtown Specific Plan in CJP	X			CED, PWD				
H.	Safe Routes to Transit	X		X					
J.	Update the City's transportation impact fee to include non-motorized improvements as allowed by law	X							

CED = COMMUNITY & ECONOMIC DEVELOPMENT, PWD = PUBLIC WORKS DEPARTMENT

DOWNTOWN CONCORD SPECIFIC PLAN

7.5 AFFORDABLE HOUSING STRATEGY + ECONOMIC DEVELOPMENT INCENTIVES

EXISTING AFFORDABLE HOUSING DOWNTOWN

Affordable housing is typically defined as housing which costs no more than 30 percent of the gross income of all household members. The City of Concord's median income (called Area Median Income or AMI) for a household of four is \$93,500. A monthly rental payment or monthly mortgage payment of not more than \$2,300 would be considered affordable to a household earning the median income in the City.

There are currently about 4,200 households in the Downtown Project Area, divided roughly into fifths among five income categories (see Table 7.1). About 64 percent of households (2,700 households) in the Study Area earn 80 percent of Area Median Income or less, while that figure is 47 percent of households in the City and 40 percent of households Countywide. Because the Study Area has a higher concentration of lower income residents than the City or the County, the need for and existence of affordable units in the Study Area is significantly higher than in other parts of the City.

Two types of affordable units are analyzed here: income-restricted "official" affordable units and de facto, market-rate affordable units.

Table 7.1
Household Income, Downtown, Concord,
Concord Contra Costa County

Income Category (1)	Downtown (2)		Concord		Contra Costa County	
	#hhs	#hhs% of total	#hhs	#hhs% of total	#hhs	#hhs% of total
Extremely Low	935	22%	196	2,509	1,750	758
Very Low	932	22%	7,319	16%	53,254	14%
Low	838	20%	6,636	15%	45,814	12%
Moderate	936	22%	7,195	16%	48,702	13%
Above Moderate	563	13%	9,941	22%	76,887	21%
Total	4,204	100%	13,979	31%	146,269	39%

(1) Census income categories do not match categories exactly. Census data has been interpolated to fit the income categories for summarizing purposes.

(2) Data from ACS Census updated in 2011 and includes the PDA geography within Census block groups. Total block groups geography is slightly larger than the Project Area.

* 2010 Census; EPS

Income restricted units. Locally supported income-restricted affordable units Downtown (and elsewhere in Concord) are shown on **Table 7.2**. As shown, the Concord Housing Successor Agency supports about 685 income-restricted housing units. While Downtown has about 9 percent of the City's housing units, it has almost 45 percent of all income-restricted affordable units, totaling nearly 318 units. The affordability restriction on about 130 of those units will be up within the next 20 years, which means that those units may be at risk for conversion to non-income restricted, market-rate units. **Figure 7.2** shows the locations of these units.

De facto, market-rate affordable units. The number of households in the Study Area earning below median income is significantly larger than the number of locally-supported income-restricted affordable units in the Study Area (about 2,700 households compared to 318 units). Residents of lower income households in the Study Area must therefore (1) live in market-rate units which are lower cost and/or (2) they are likely paying a significant portion of their incomes towards housing costs and/or (3) share space with one or more households.¹

There are about 2,382 de facto/market-rate affordable units in the Downtown with 1,663 of those units rented (either in multifamily structures or single-family/attached houses) and about 719 units owner-occupied (see Table 7.3). While the exact locations of these units are not known, based on a tour of the Downtown and a review of recent sale prices of homes by geography, lower cost housing is likely located in the Ellis Lake District (in apartments) and in the Crawford Villages area (in single-family rentals).

Overall, in the Downtown about:

- 12 percent of the units are income-restricted
- 40 percent are de facto/market-rate affordable rental units and
- 20 percent are de facto/market-rate affordable owner-occupied units (see Table 7.4)

The rest of the units are market-rate units priced for higher income households (meaning those earning more than 80 percent of the area median income).

PROJECTED AFFORDABLE HOUSING NEED

Three projections for the affordable housing need have been completed:

- (a) Current distribution of incomes by household.
- (b) Types of industries projected to grow Downtown and their typical income ranges.
- (c) Regional Housing Needs Allocation proportion of affordable units.

Based on a review of factors (a) and (b), new households are expected to include more households in Moderate to Above Moderate income categories and fewer lower income households than currently reside Downtown (see Table 7.4 and Figure 7.1). The projected number of units by household income range totals 970 to 2,400 new households earning 80 percent of AML or below.

For the 2014 to 2022 period, the City of Concord's Regional Housing Needs Allocation that must be planned for within the next Housing Element update *citywide* is a total of 3,462 housing units, 36 percent of which are to be affordable to households earning no more than 80 percent of area median income. This allocation provides a broad indicator of the regional affordable housing need and Concord's share of the total projected need for the eight year period. While these units are not allocated at a smaller geographic level, the 36 percent metric indicate a needed level of affordability for all units in the City.

While this analysis finds that between 36 and 45 percent of new households are likely to earn 80 percent or less of AML in the Downtown, it would be very difficult for a given market-rate development project to provide this level of affordable units because the cost to subsidize such high numbers of income-restricted units would be expected to eliminate the profits that make new development an attractive investment.

DOWNTOWN CONCORD SPECIFIC PLAN

AFFORDABLE HOUSING AND ANTI-DISPLACEMENT POLICIES

Concord's Downtown contains a higher proportion of both official and de facto affordable housing than the rest of the City, reflecting the lower income demographics of the Downtown. The Downtown Specific Plan envisions various improvements to the Downtown that will make it an attractive and convenient location for residents of all income levels. The City must balance various goals for attracting higher-quality development to the Downtown (which would command higher residential and commercial rents) while not displacing existing lower income households

and creating new space for future low income households. The below sections summarize existing City policies, suggest new policies for consideration, and outline an anti-displacement strategy for Downtown.

EXISTING CITY AFFORDABLE HOUSING POLICIES

The City has existing Inclusionary Housing requirements which are applied to for-sale developments with five or more units and rental developments receiving City financing, assistance

or subject to a development agreement. The existing Citywide Affordable policies generally require that 10 percent of the proposed units are income-restricted to households making no more than 120 percent of AMI. The number of income-restricted units can be met with onsite affordable units offsite units, through the payment of an in lieu fee, or by acquiring existing, unrestricted units and converting them to income-restricted units (see Table 7.5 for summary). The City offers a number of incentives to help mitigate the costs of the requirements including density bonuses, modifications to development standards, impact fee deferrals, and expedited application processing.



Figure 7.1

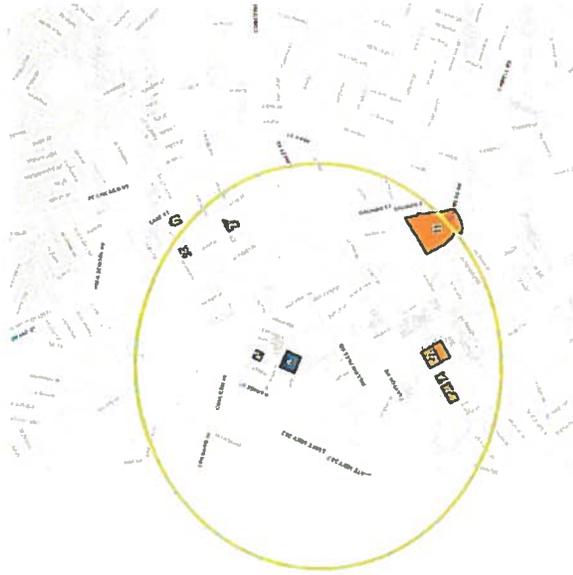


Figure 7.2 Green circle indicates housing sites in the Downtown

Housing Type
■ Dry Disabled Housing
■ Multi-Family Housing
■ Senior Housing

**Table 7.2
Locally Affordable Housing in Concord under Regulatory Agreement with City**

Property Name	Property Address	Affordable Units (1)	% of all Affordable Units Downtown	Expiration of Income Restriction	Expiration Dates Within Next 20 Years
Diane Court Apartments	1750 Diane Court	4		2021	
Diane Court Apartments	1751 Diane Court	4		2013	
Caldera Place Apartments	2401 Bonifacio Street	11		2055	
Californian Apartments	1621 Detroit Ave.	9		2014	9
Camara Circle Apartments	2501 & 2266 Camara Circle	51		2055	
Chateau on Broadway	1700 Broadway Street	31		2041	
Concord Residential	2141 California Street	10		2041	
El Sol Apartments	1890 Farm Bureau Rd.	10		2019	
Jordan Court II Apartments	2248 & 2250 Almond Ave	4		2019	4
Lakeside Apartments	1897 Oakmead Dr.	122		2059	
Las Casillas	1181 Detroit Ave	4		2059	
Phoenix Apartments	3720 Clayton Road	11		2022	
Plaza Tower Apartments	2020 Grant St.	95		2017	95
Riley Court Apartments	2050, 2051, & 2061 Riley Court	47		2052	
Victoria Apartments	1650, 1670, & 1680 Detroit Ave.	12		2035	
Vintage Brook Apartments	4672 Melody Drive	147		2056	
Virginia Apartments	1140 Virginia Lane	89		2054	
Windsor Park Apartments	1531 & 1611 Adelaide St.	24		2015	24
Total, 18 total project sites	Total, 18 total project sites	685	46%		132

(1) Includes locally assisted affordable units. In addition, the City has a number of housing projects which are federally assisted (Section 8). One Section 8 project, The Heritage with about 121 units, is located in the Study Area.

Bold italics formatting indicates project located within the Study Area (a total of 318 units).

* City of Concord compliance monitoring report; EPS

Table 7.3
Income-Restricted and Estimated "De Facto" / Market-rate Units Downtown

Income Category (1)	# Households (2)	% of Total	Number of Income- Restricted Units Downtown	De Facto / Market Rate Total Units	Est. Rentals (4)	Est. Owner Occupied (4)
Extremely Low	935	22%				
Very Low	932	22%	318	2,382	1,750	758
Low	838	20%				
Moderate	936	22%				
Above Moderate	563	13%				
Total	4,204	100%				

(1) Census income categories do not match categories exactly. Census data has been interpolated to fit the income categories for summarizing purposes.

(2) Data from ACS Census updated in 2011 and includes the PDA geography within Census block groups. Total block groups geography is slightly larger than the Project Area.

(3) Subtracts all units occupied by households in the three income categories below Area Median Income from the number of Income Restricted Units.

(4) Estimated based on Census data which reports households paying more than 30 percent of their household income towards rent or mortgage payments.

*2010 Census: EPS

Table 7.4
Income-Restricted and Estimated "De Facto" / Market-rate Units Downtown

Income Category	Current, 2010 Data (1)	Downtown
Extremely Low	935	22%
Very Low	932	22%
Low	838	20%
Moderate	936	22%
Above Moderate	563	13%
Total	4,204	100%

Projected New Households, 2040 (2)			
Extremely Low	322	-	814
Very Low	322	-	812
Low	322	-	729
Moderate	490	-	1,347
Above Moderate	490	-	1,347
Total	3,660		

Total Projected Households, 2040			
Extremely Low	1,257	-	1,748
Very Low	1,255	-	1,744
Low	1,160	-	1,567
Moderate	1,427	-	2,283
Above Moderate	1,053	-	1,910
Total	7,864		

(1) Census income categories do not match categories exactly. Census data has been interpolated to fit the income categories for summarizing purposes.

(2) Job growth by industry were analyzed for the Study Area to estimate the incomes of new workers. Projected household income ranges are based on these estimates while also taking account of the existing household income distribution in the Study Area.

*2010 Census; EPS

DOWNTOWN CONCORD SPECIFIC PLAN

ADDITIONAL AFFORDABLE POLICIES FOR CONSIDERATION

The City may pursue a multi-pronged approach to retaining and creating new affordable units including new regulatory requirements and code changes that reduce costs.¹

Consider affordable housing nexus fee for rental development. In the past, many cities required new market-rate rental apartment projects to provide onsite affordable units. At the present time, below market-rate units are no longer required in new rental developments, as a result of a recent court decision regarding affordable housing (Palmer) that found inclusionary zoning for rental housing projects violates the Costa-Hawkins Act regarding restrictions on rent control. Concord may explore the potential to adopt a nexus-based fee that rental projects would pay to support affordable housing in the City, with the possible alternative of providing affordable units within their projects.

¹ Residents also may participate in federally-assisted units either in public housing projects or with Section 8 housing vouchers, administered through the Contra Costa County Housing Authority. Roughly 1,200 households in Concord received Section 8 vouchers in 2007.

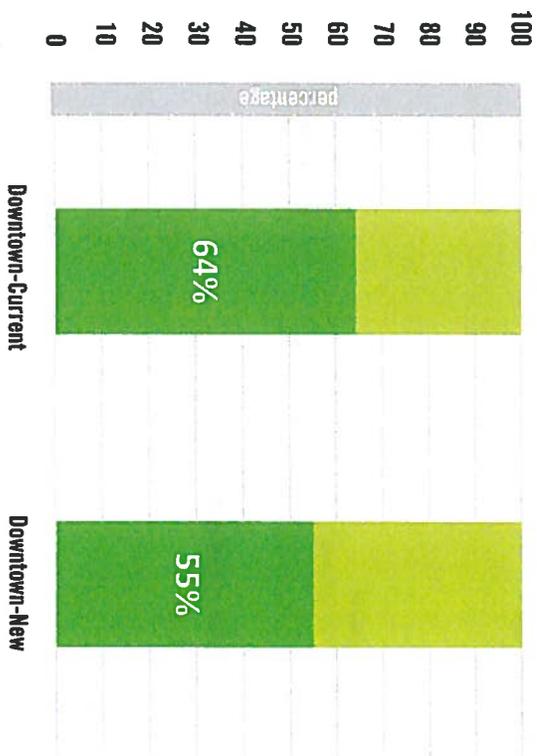


Figure 7.3 Current & Projected Low Income Households Downtown In 2013 (80% of Median means \$66,250 annual gross income for a family of 4 in Concord)

Lower parking requirements. To reduce development costs, the City could consider reducing parking requirements for all projects in this transit-accessible location, though developers may or may not exercise this option depending on market considerations. Parking reductions may be effectively paired with travel demand management techniques, such as unbundling parking from basic housing costs and providing transit passes or carshare memberships or access.

Defer City fees or consider waiving certain fees for all projects exceeding the inclusionary requirement. To further reduce development costs, the City could consider waiving certain City fees for new housing developments that pursue the added density or simply deferring the payment of such fees until later in the development process to reduce developers' financing costs.

² Note that many affordable housing strategies also include Density Bonus programs. The Downtown already has relatively high density zoning and the City's existing affordable housing policy includes density bonuses for projects with affordable housing. Therefore, additional density is not considered as a new policy or strategy.

Table 7.5
Summary of Existing City
Affordable Housing Program

Item	For Sale (5+ Units)	Rental - City Assisted Projects
Very Low	0%	6%
Low	6%	10%
Moderate	10%	0%
		16%

Options:

- 1) Build required affordable unit(s)
 - 2) Pay in lieu fee
 - 3) Develop units off-site within the City
 - 4) Acquire 2 unrestricted multifamily units for each one required and income restrict those units. Rental projects only subject to inclusionary ordinance if receiving Financial Assistance from City
- Incentives—one or More of the following:
- Density bonus²
 - Modifications to zoning/ dev standards (if units exceed requirement)
 - Expedited processing
 - Fee Deferral to occupancy

³ All owner-occupied units, even those occupied by low-income residents, are not targets of anti-displacement strategies because their exit from the Downtown would only occur if a household agrees to sell a property. The City's goals do not include limiting relocation options for homeowner. Higher income renters meanwhile, even those earning moderate incomes, are less likely to be displaced because the differential between the rents they are paying and higher market rents is typically not large enough to a property owner to justify the transaction costs typically associated with evicting renters from a building.

ANTI-DISPLACEMENT STRATEGY

Displacement of low-income residents (often called gentrification) occurs as particular geographies become more attractive to higher income residents and commercial tenants. These new users can pay more to purchase or rent property and landlords or developers convert existing de facto affordable units to other uses. In the Downtown, residents that are the most at risk of displacement by wealthier residents or high-rent commercial uses are those in unrestricted rental units.³

These residents live in about 1,660 rental units in the Downtown (see Figure 7.4). While this is a significant number of units, the Specific Plan has identified opportunity sites which can accommodate 3,465 residential units and more than a million square feet of new office and commercial uses without the loss of existing residential units and without using the maximum zoning capacity of those sites. For displacement to occur, the land costs plus the entitlement risk associated with displacing current residents would need to be significantly lower than land costs for similarly situated land within the Downtown.

Anti-displacement strategies to reduce the possibility of losing income-restricted units Downtown would include implementing a monitoring program whereby the City ensures that property owners must notify the appropriate city staff prior to the expiration of income restrictions on all units in a particular property.

Anti-displacement strategies to reduce the possibility of losing these de facto affordable units Downtown include the following:

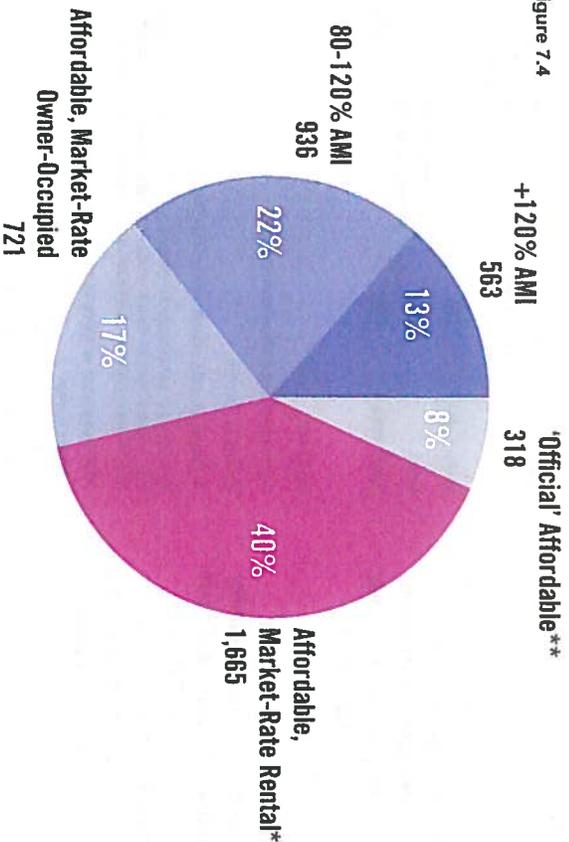
Monitor the pace and locations of new development within the Downtown.

While the Specific Plan has many development opportunity sites that are not occupied by residents, as part of an anti-displacement strategy the City may monitor transactions and development proposals to determine whether land costs in the Downtown are motivating developers to purchase existing housing for demolition and redevelopment.⁴

Facilitate conversion of de facto affordable units to restricted, "official" affordable units.

The City's existing policy provides developers the opportunity to purchase and rehabilitate existing units and convert them to income restricted units. The City could strengthen its preference for this alternative in the Downtown by making this preference clear in its policy language, by reducing the number of rehabilitated units required under the policy, and/or by assisting developers in locating potential properties by maintaining a database of potential willing sellers.

Figure 7.4



^{*}This portion of the chart is shaded to indicate the types of units which are traditionally most vulnerable to displacement as areas become attractive to higher income residents. This is discussed in the anti-displacement section of this section.
^{**}In addition to the "official" affordable units, eligible residents may also gain access to federally-assisted units either in public housing projects or with Section 8 housing vouchers, administered through the Contra Costa County Housing Authority. Roughly 1,200 households in Concord received Section 8 vouchers in 2007.

Downzone selected de facto affordable areas.

To avoid displacement of existing lower-income residents, the City may consider 'downzoning' particular areas of concern for displacement. This reduction will minimize the financial incentive to demolish and replace existing units to achieve higher property values, thus minimizing the concern that existing residents will be physically displaced by new development.

⁴ While in the future it is possible that the redevelopment costs of lower income housing properties may be much lower than redeveloping other uses, a review of sale records in the area since the City's comprehensive rezoning - which included increased zoning in some residential areas of the Downtown - do not indicate sales of multifamily properties.

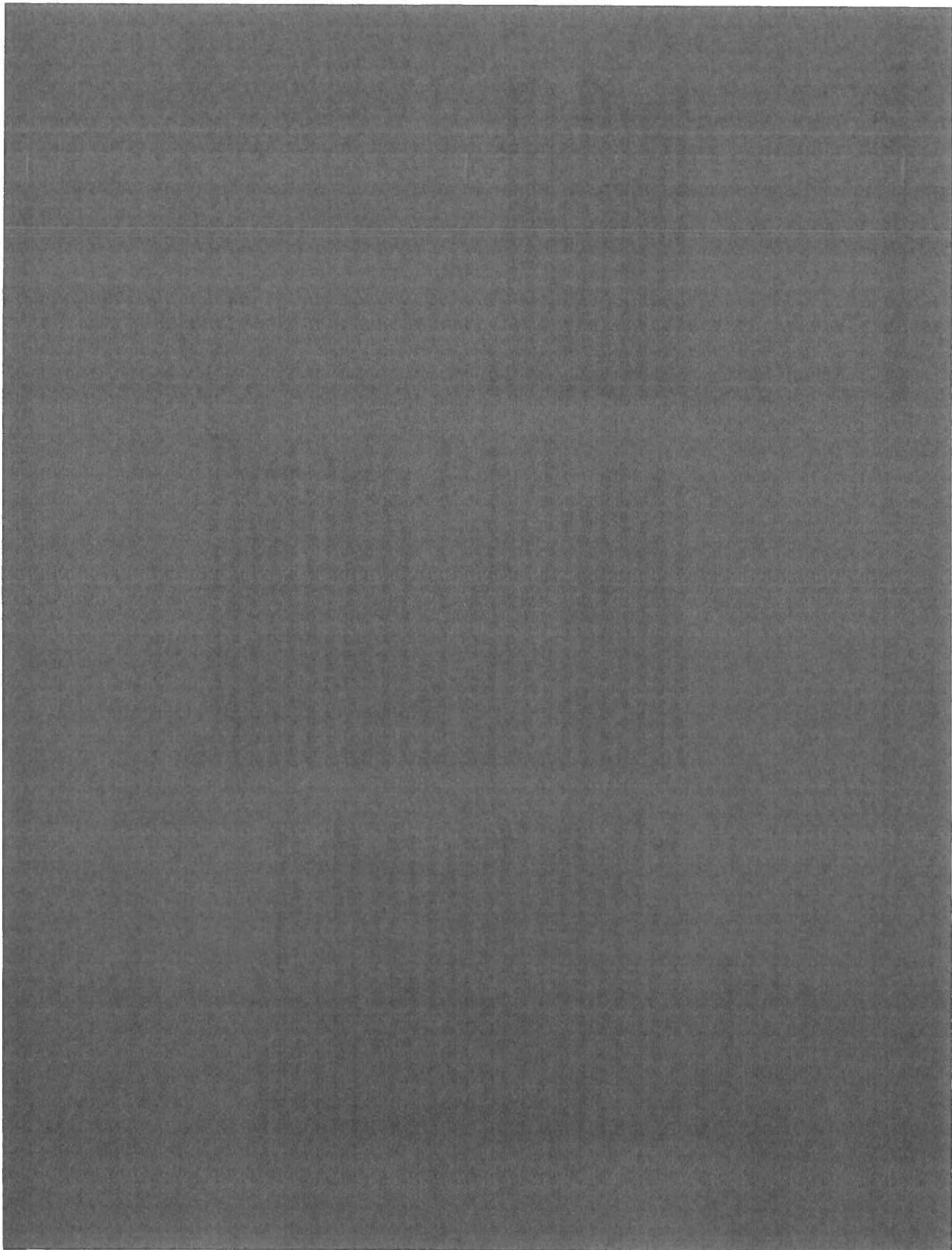
7.6 TRANSPORTATION IMPLEMENTATION

Transportation implementation actions are listed in the Implementation Matrix in Section 7.3. In summary, the implementation measures range from amendments to the zoning code to provide greater parking requirement flexibility, adopting Street Designation overlay for the Specific Plan area as shown previously on Figure 5.1 to provide modal priority guidance for future changes to the street network, and preparation of additional documents/guidelines. Additional studies include a feasibility study for the financing a local community shuttle through a Property Based Improvement District (PBID), preparing, adopting and implementing a citywide bicycle master plan, preparation of a downtown parking management plan that will facilitate near-term development in the downtown area without the need for additional off-street parking supplies, preparation of Transportation Impact Study Guidelines that includes guidelines for the evaluation of non-auto travel modes in the Specific Plan area, and updating the City's Transportation Impact Fee program and include non-motorized improvements.

The City of Concord has also been awarded funding for planning and infrastructure projects, including a Transportation Development Act grant for the preparation of the Citywide Bicycle Master Plan, and a Metropolitan Transportation Commission One Bay Area Grant for the construction of improvements on Detroit Avenue, and last mile bicycle and pedestrian enhancements on Clayton Road, Concord Boulevard, Grant Street and Oakland Avenue to the downtown BART station. Preparation of the Bicycle Master Plan is planned to start in the Spring of 2014.

Various pedestrian and street scape improvements are currently in the design stage, including a traffic signal at the Clayton Road/Sutter Street intersection, replacements of the sidewalk on the north side of Willow Pass Road between Sutter and Gateway Boulevard, reconstruction/rehabilitation of numerous intersections in the downtown area, installation of way finding kiosks, installation of Class III bicycle route signage on portions of Grant Street and Salvio Street, and installation of new bicycle lockers near the downtown BART station. Final design is expected to be completed by August of 2014 with construction starting in late 2014, early 2015.

The City has also applied for safe routes to transit grant funds to evaluate improvements for non-motorized access to the three Concord BART stations—North Concord/Martinez, Downtown Concord and Pleasant Hill/Contra Costa Centre—which are the primary stations that serve residents and employees in Concord. Additional grant funding opportunities will be sought to implement other strategies identified in the Specific Plan, but the timing will be contingent of the availability of funding.



08 Community Outreach

8.1 PROCESS

At the outset of the project, the P+W team prepared a public outreach work plan and conducted working meetings with City staff to gather their input. The goal was to ensure City buy-in, both at the conceptual level and in terms of specific tools and tactics. The public outreach work plan serves to guide the outreach process throughout the planning process. The basic elements of the outreach process required by MTC are included in this Specific Plan. The main components of the public outreach strategy methodology are:

IDEAS FAIR COMMUNITY WORKSHOP

A preliminary community workshop was held in September 2012 for generating ideas, public input and direction for the Specific Plan.

COMMUNITY WORKSHOP #1: ALTERNATIVE PLANS

The project includes two community workshops. The first workshop was held during the Alternatives Analysis phase of the project in May 2013. This workshop was aimed at facilitating useful community and stakeholder input, refining previous findings, shaping specific alternatives, and helping disparate community elements and stakeholders arrive at points of common agreement. The feedback from the community at this workshop was recorded and summarized in the Alternatives Report, issued July 2013.

COMMUNITY WORKSHOP #2: PREFERRED PLAN

A second community workshop was held October 7, 2013 and will be aimed at soliciting input and feedback on the proposals contained within the Preferred Plan. The results and feedback from this workshop will be included in the final draft Specific Plan Report in 2014.

DOWNTOWN STEERING AND TECHNICAL ADVISORY MEETINGS

The Downtown Steering Committee (DSC) met ten times prior to the preparation of this report. The Technical Advisory Committee (TAC) has met four times prior to the preparation of this report. The role of the DSC is to provide oversight of the planning and urban design process, thus ensuring community buy-in, whereas the TAC is primarily a forum for creative input from partner agencies. Summaries of the DSC and TAC meetings which occurred during the earlier phases of the project were included in the Alternatives Report. Summaries of subsequent meetings which occurred during the Preferred Plan and draft Specific Plan phases of the project are included in the feedback section below.

PLANNING COMMISSION MEETINGS / CITY COUNCIL MEETINGS

Planning Commission and City Council Presentations were held June 19, September 18, and September 24, 2013 and February 4, 2014, where status updates on the progress of the Plan were provided. The feedback from these presentations and discussions is included below.



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8.2 FEEDBACK

As noted above, ten DSC and four TAC meetings occurred during the phases of the project which are described in this report. Minutes of the DSC meetings, prepared by City Staff, are included below in chronological order.

REGULAR MEETING OF THE DOWNTOWN STEERING COMMITTEE FOR THE SPECIFIC PLAN

JUNE 3, 2013 (PRIOR MEETINGS MARCH 13, 2013 & APRIL 18, 2013)

The introductory meeting of the Downtown Steering Committee, City of Concord, began at approximately 6:30 P.M., Monday, June 3, 2013, in the Concord Library Community Room.

DOWNTOWN STEERING COMMITTEE (DSC) CONSIDERATION ITEMS

DSC Consideration Items

Updates on Downtown Projects

Senior Planner (Project Manager) Joan Ryan welcomed the Committee and Planning Manager Carol Johnson provided an update on the Climate Action Plan Admin. Draft and then on the Complete Streets General Plan Amendment scheduled for review by the Planning Commission on July 17. Ms. Ryan provided an update on the Development Code Clean-Up Amendments moving forward to the Planning Commission for review on June 19 and on the Renaissance Square Phase II project anticipated to be heard on July 17 by the Planning Commission. Ms. Ryan also may the Committee

aware of two OBAG grants that the City has scored very high on and is awaiting confirmation of an award in mid-June. Chair Leone provided additional details on the two grants including the Last Mile and Detroit Avenue projects, both located within the Study Area.

Community Workshop feedback from May 6th and DSC feedback on April 18

Ms. Ryan continued with three slides summarizing the May 6th Community Workshop in which over 50 people were in attendance. She also summarized the main points heard by the project team during the last Downtown Steering Committee.

Visioning Session and Sharing among DSC members

Ms. Ryan briefly described the goal of today's discussion was to understand the vision of the Committee for the downtown, for members to be respectful of others during the Roundtable discussion, to have the Committee prioritize the project goals, and to provide the consultant with clear direction.

Ms. Johnson noted that staff would be capturing the Committee comments on one of four boards as either: 1) Policy; 2) Plan; 3) Rule; or 4) Action. Committee members then began to share their vision for the development of the downtown:

Chair Leone – Indicated he would start it off in sharing his opinions of his vision for Concord. Focus on creation of a hook between Downtown BART to TSP. He would like to create a more

walkable environment with wider walks,

similar street lights to those found in TSP and recommended lighting the trees along Grant St. similar to TSP, such that Grant Street become an extension of TSP, so that the appearance is all tying in and mirroring the appearance of Todos Santos. Way finding signs would lead the way between BART and TSP. He noted his desire for a Mission-style/Santa Barbara appearance to link to the history of the City and to provide consistency with some of the buildings adjacent to TSP. Chair Leone envisioned creating an arch way over Grant Street going toward downtown at Clayton Road, welcoming people to the Downtown. He suggested area along Oakland Ave., across from BART should be examined for rezoning to allow higher density housing should be examined for rezoning which would also provide additional support for retail businesses along Grant Street. He suggested that housing should be built next to BART near Grant Street to attract retail/restaurants along Grant Street.

Vice Chair Grayson – noted there were a lot of great ideas at the table. He noted that one of the opportunities is that he wants to focus on creating synergies. He noted there are some good things happening in the downtown and that the City needs to have a plan of connectedness among these locations all the way down to Contra Costa Blvd. He emphasized creating the downtown as a destination. He noted we need to examine what we do have and what we are missing. He envisions an entertainment/conference district, possible Performing Arts Center/Conference Center. He

reflected that a retail anchor may not be feasible; but other types of anchors may be created through an entertainment/conference district that doesn't compete with other uses the City already has.

Ken Dami – Echoed Vice Chair Grayson, noting that the Chamber of Commerce membership (committee) is examining the idea of a conference center as part of exploring a tourism business investment district and looking at potential ways to capitalize on funds that might be generated by including a performing arts center/conference center to create a destination in Concord. He noted in another membership the Chamber is looking at transportation issues, which as we have heard in prior DSC meetings there needs to be connectivity to connect other shopping areas. The Chamber's membership is examining how we see this connectivity growing outside of Todos Santos, particularly if a conference center were added.

Jeff Woods – Focus on the creation of more jobs; he emphasized that there needs to be focus on filling existing offices to create occupancy and synergy so people don't have to use their cars downtown. There are vacant offices which if filled would create that additional demand for retail, energy, etc. We should examine what would be necessary to incentivize businesses/offices to come downtown.

Ed Andrews – Shuttle is necessary to get residents and employees out of their cars and moving from place to place. Rather than having housing focused

immediate BART area, need to spread it out a little.

Richard Eberl – Supports concept of Convention Center/Performing Arts Center use. He noted, building such an amenity you will be more likely to get additional housing. Mr. Eberl noted he believes by providing an amenity such as this it will make it more attractive for developers to come in. He stated, affordable housing will not assist in supporting the commercial development in the area. The Committee needs to focus on what is good for the community not filling State mandates, and doing what's best for our community. We do not want "stack and pack" with infeasible retail on the ground level, similar to other cities.

Tim McGallian – Noted that on terms of the "stack and pack" comment, referring to Pleasant Hill, Concord is more suited toward development in that the City already has an attraction to build around, i.e., the area around Todos Santos. We need to be careful about the type of housing that comes in, not everyone can afford the type of rents that Renaissance requires. There needs to be a variety and a mix. The City needs to think about providing incentives so that we can have people downtown all the time, not just for special events. Concord is too spread out; so residents still want their cars. Need to make people in Concord want to come to the Downtown. He noted having the additional people downtown, then commercial and office will follow and it will make it more attractive to be able to support an amenity such as a Performing Arts venue. The City cannot use BART as a crutch since probably about 90% of people who do business

here live here.

Ross Wells – Suggested that utilizing Grant Street as a one-way road may be a possibility. This would make Grant St. more pedestrian friendly and would allow the City to widen sidewalks and incorporate tree wells and more patio dining, benches, etc. that would improve the atmosphere/energy along the street. One-way from BART would provide a better atmosphere and provide for outdoor eating to greatly improve Grant St. With the right mix of restaurants, people will come on BART to visit and patronize businesses.

Kirk Shelby – Questioned: How do you deal with bike lanes? Need to look at the circulation issues. Possibilities for Colfax, Grant, Mt. Diablo they are not heavily used. There may be an opportunity for Willow Pass traffic to get routed off Willow Pass Road and more onto Clayton Road. Try to keep pedestrian/bikes off Clayton Road where cars are going at least 40 mph. Expand to be more viable; establish a need that's unique to Concord. Need a regional anchor, not something where you are competing with existing uses. He noted, looking at Grant St. you can mirror what's going on the other side. He suggested bringing Ron's Arch all down the way to BART, to make the statement "You've Arrived". So you are there right away. Move residential up (vertically) a couple stories and provide more opportunity for retail. Reduce constraints. The walk on the BofA campus is very nice, and leads you into downtown as well as an alternate path. We need to examine and prioritize streets so that these physical constraints are not

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limiting circulation.

Darrin Walters – The sidewalks downtown are tripping hazards; infrastructure needs improvement in this regard. He noted that Colfax, East Street, Mt. Diablo and along the park all have many tripping hazards. There are numerous very bad spots around downtown including on Galindo near Chevron. Spots near Qzar and the Legion hall, you need to really watch where you are walking. Bricks are popping up in a variety of locations due to trees. On Colfax street, the sidewalks need to be repaired; need to examine Grant Street – one side looks good, the other needs to be improved. This needs to be examined because once people fall they are not going to want to walk around within the City. Prospective employers look at these things and make an assessment that the City is not spending its money in the right areas and makes a determination not to locate in Concord.

Kathy Renfro – Suggested that activities need to be added into the mix; trees and flowers as well. Agree with housing component, but entertainment is critical, because people get tired of restaurants.

Adam Foster – Our responsibility is to provide infrastructure that will allow organic development to occur. We have an anchor tenant and that is Todos Santos Plaza. TSP IS the attraction downtown. He suggested there should be a pointed policy reducing vehicular traffic speed to 25 mph for most of the downtown area, except for 1-2 east/west and north/south arterials. The speed of vehicles on certain roads is a deterrent to walkability. Loves the idea of mimicking design characteristics downtown. He noted there should be a foot candle lighting

policy for certain minimum and maximum lighting levels. Salvia Street is dangerous near East St. and Port Chicago. The appearance of our City should demonstrate, "We care about our City, Come Here". That would be our biggest advertisement.

Kathy Renfro – Recommended tying in the museums and historical properties and providing activities at Ellis Lake and tying into Park and Shop.

Ron Leone – We see anchors in many ways. San Carlos, "the Town" Restaurant served as an anchor at the time, which serves as a creator of businesses.

Ken Dami - Noted that Market Hall in Rockridge is a unique area also close to BART that attracts many visitors.

Tim McGallian – Questioned, What would we incentivize businesses and restaurants with? I believe that anchor could be a restaurant. There are a number of business owners who are interested in coming to Concord, but it is a bit of a chicken and egg syndrome, in that there are not the numbers necessary to attract new businesses, without additional housing and potentially some type of incentives.

Ron Leone – Stated, that although Redevelopment Funding is gone, when we do improvements to the downtown, the City will sell itself. A performing arts center or a similar use would sell the City even more. He also noted that a restaurant could be an anchor to Concord.

Jeff Woods – Noted that the incentive is the people. If there is a solid base of people, businesses will

want to locate.

Adam Foster – If I was locating a business, I would be looking at the quantity of people. We are not going to become Broadway Plaza. The biggest key is to improve the area around BART. The walk from BART to downtown is initially blocked by busses, then taxis and bike lockers. We need to provide a clear path, pedestrian friendly to lead people downtown. Taxis and busses should be on the other side of BART. Mr. Foster noted that he utilized www.Walkscore.com when choosing to live in Concord and the website provides ratings based on a number of criteria to determine how walkable an area is. City needs to focus on working with BART to remove these constraints. Could possibly create our own walkability standard, and perhaps other tools, as long as we keep it fun and innovative we will be successful.

Darrin Walters – Better signage is needed at BART to lead people, current signs are very tall.

Planning Manager Carol Johnson - noted the City of San Pablo did its own plan, set up a scoring way with metrics for pedestrians, bikes, and vehicles.

Ken Dami – stated that Market Hall at Rockridge exists because people could not afford San Francisco. Many homes in area are rented and shared. He noted the area is very walkable, sidewalks are terrible, but people are out all the time there and along College Avenue in that same area. He noted this is an example of a BART destination. Another strong example is the Oracle Arena where people absolutely use BART to

get there. He also noted, affordable housing is desirable but a balanced approach is necessary. He suggested, if you want the disposable income, that young people prevalently seem to spend more in that regard. The consultant can be used to provide information there. He noted you need to create continuity and connectedness among Downtown and connect to other parts of the downtown.

Ed Andrews – stated the sidewalk issue is related to the type of trees used in the downtown and this needs to be examined through this process. In order to flatten out sidewalks you are going to need to remove and replace trees and consider what will be planted for the future to reduce maintenance and encourage walkability. He noted that iron grates can also be used to increase walkability in narrower areas.

Kirk Shelby – Recommended that you need to create a space where you can do all these things, be entertained, eat, shop, exercise, preferably without driving that will help the downtown area.

Ross Wells – Has the City ever done a survey as to where people come from at the City's events.

Downtown Manager Florence Weiss noted that 50-70% of Downtown patrons of the Music and Market series and other events are from Concord. But, many are from surrounding areas including Orinda, Danville, Martinez, and Pleasant Hill. Farmers market attracts people who take BART because the produce at our market is less costly. We also cross coordinate with Swift Plaza and

other employers to incentivize shopping.

Ron Leone – Stated that if we agree with a theme of early California, you could implement street vendor carts in certain areas to add to that street activity/atmosphere which could facilitate that retail environment.

Kathy Renfro – Could also utilize the pedal-carts to get people around.

Adam Foster – In terms of Clayton Road, we could look at the pedestrian bridges and may want to target certain locations if the traffic level suggests potential there. It's hard to imagine now, but in the future as the right projects come in.

Gravson – Noted, he could see at some time in the future, the Bank of America complex potentially utilizing a bridge for pedestrians near Clayton Road and that being a possibility in the future.

Working Session on Future Development

Review of Project Goals

City staff the led the Committee through an exercise reviewing, discussing and prioritizing the following project goals while following a forced ranking exercise to determine which goals were a priority for the Committee in light of the future

development of the downtown.

Existing Goals for the Project are as follows:

1. Increasing BART ridership and efficiency of multi-modal connections
2. Intensification of uses and densities from current built levels
3. Promoting mid and high-density housing
4. Constructing housing projects for a mix of housing types and income levels
5. Increasing job creation
6. Enhancing a strong business climate and expand the City's economic base
7. Implementation of strategies to foster a vibrant downtown, prior to initiation of construction within the Concord Reuse Plan Area.

The Group agreement on prioritizing of the goals through the exercise concluded with the following order 5,6,2,1,4,3 (referencing the numbering above).

Goal #7 was modified by the Committee and referred to as more of a Mission Statement. Ms. Johnson noted that she would synthesize Goal 7 with the comments received to come up with a few mission statements for review by the Committee at the next meeting on July 1.

Mr. Shelby – noted that in terms of Strategies for CNWS; he anticipates that the reuse area will have

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a unique identity there compared to downtown Concord.

Economics Responses

Ms. Ryan reviewed feedback from EPS regarding the Committee's earlier questions from the April 18 DSC meeting. Responses are included within the June 3 Presentation (on Project website).

Affordable Housing memo

Ms. Ryan presented an additional five slides providing an overview of affordable housing including the current income levels for Contra Costa County, a schedule of milestones for the roll out of RHNA numbers, the City's draft RHNA numbers, the existing income levels for households within the downtown and the affordability plan for the Concord Reuse Plan.

Planning Manager, Ms. Johnson noted that the RHNA requirement is for the City to provide opportunity sites for affordable housing through an adequate amount of land zoned for such housing densities, but the City does not need to construct that housing on its own, but rather the City needs to provide policies and incentives as well as adequately zoned land for the opportunity to occur.

Chair Leone asked, "How does the City get penalized?"

Ms. Johnson indicated that if the City does not provide for opportunities within our Housing Element, then the City's Housing Element will not be approved by the State. If the City does not prepare its Housing Element within the required

timelines, then the City will be ineligible for the grants and funding opportunities that require a qualified Housing Element.

Richard Eber – Stated that he was troubled with the State mandates. If you put too many restrictions and regulations on developers, then without redevelopment funds any longer being available, there are not going to be people that will want to construct this housing and the quality of that housing, will likely not be good.

Mr. Eber stated that he has reservations regarding the affordable housing memo and whether there is a conflict of interest since the author is tied up with ABAG/MTC in other areas of her work. Question whether the author is working for Concord or ABAG/MTC. I believe everyone would agree this is the best meeting we have had in terms of presenting ideas about our downtown area and the ideas came from people from Concord. The ideas that come from the Committee are those that the City should be chiefly concerned with.

Ron Leone – Noted that it is a balancing act in that the City needs to comply with State Law, but at the same time design a complete plan that is good for Concord. I concur that I have enjoyed this meeting

because we had an opportunity to hear from everybody. We will take time next meeting to hear more from the audience.

REGULAR MEETING OF THE DOWNTOWN STEERING COMMITTEE FOR THE SPECIFIC PLAN

JULY 1, 2013

I. PUBLIC COMMENT PERIOD

Matt Vander Sluis, representing Greenbelt Alliance, provided attendees with his printed platform from the Community Coalition for a Sustainable Concord (CCSC) entitled "Community Platform for Downtown Concord." He noted that the CCSC worked closely with the City on the Concord Naval Weapons Station and is again interested in working with the City on the Downtown Specific Plan.

PUBLIC COMMENTS CLOSED

II. CONSENT ITEMS

A motion was made by Vice-mayor Grayson and seconded by Mr. Walters to approve the meeting minutes from the previous meeting. The meeting minutes dated June 3, 2013 were unanimously approved.

III. DOWNTOWN STEERING COMMITTEE (DSC) CONSIDERATION ITEMS

Progress on Development of Alternatives
 Senior Planner (Project Manager) Joan Ryan welcomed the Committee and briefly provided an update regarding the timing of the sequence of meetings, tasks completed to date and tasks

currently underway and then next steps in the schedule. She then introduced Dennis Dornan of Perkins and Will to open with the consultant's presentation.

Dennis Dornan and Prakash Pinto then led a power point presentation providing an overview of the Grant Street Linkage between Concord BART and Todos Santos Plaza. He also provided a photo montage of Precedents with an examination of local Transit-Oriented Development and lastly a more detailed description of the three Alternatives.

Chair Leone opened the discussion up to the DSC for questions and comments and then opened the meeting up for public comment on the item.

Larry Gray – Questioned whether adding parking would take away from our intent?

Mr. Pinto responded that cars create some vibrancy to a certain degree but it is a mix. He noted that you do not need a dedicated bus lane. Mixing parking with amenities works and provides vibrancy to an area.

Vice-Chair Grayson questioned where BART is with the City's Plans?

Ms. Johnson, Planning Manager, noted that BART is supportive of the City's plans and has met with City staff regarding a variety of potential projects. She noted that BART is currently examining investments for existing stations following a period of investment in extensions of lines. She indicated BART is currently examining projects in the following categories for a number of stations

including Concord BART and they include: 1) Quick Wins; 2) Way Finding; and 3) Station investments with site improvements. She noted that BART is on the Technical Advisory Committee and is being kept up to date regarding project progress.

Adam Foster noted that the City should be able to reduce parking downtown. He also noted that cars next to the sidewalk provide some protection for the pedestrian.

Richard Eber noted that in Pleasanton they have a very inviting downtown, similar to what he believes the Committee is interested in having and noted that area would be worth looking at.

Ed Andrews noted that defined streetscape guidelines particular to the downtown are needed and believe that outdoor seating is of interest and should be supported through guidelines to provide more interest and activate the street.

Kathy Renfro also recommended that we follow examples of other trails and trail head connections and noted we need to look at Loma Vista on Cowell and the OBAG grant along Detroit Avenue to review the pedestrian experience and gauge what works.

Matt Vander Sluis, CCSC, noted that we need to examine where people are coming from in particular along the Monument Corridor. For example from

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along the green corridor, along the BART trail and so forth. He noted we need to be looking at implementation funding and learn from similar trails such as the Ohlone Trail or Iron Horse trail in Walnut Creek

Chair Leone then introduced Matt Wilson from Outdoor Republic who provided a presentation regarding his vision of the future potential streetscape along Grant Street. He described an Old Town walking district with California Heritage as a theme that included mini mercados to activate the area. He emphasized the need for creation of atmosphere and pointed to Old Town San Diego as an example. The presentation can be accessed on the City's Downtown Specific Plan page (under City Initiatives) on the City's Website www.cityofconcord.org under the July 1 presentations heading.

Paul Sinz, Contra Costa Properties, voiced that the City needs to look at other things to customize the downtown. He recommended that in consideration of moving people around within the downtown, the Committee should look to Disneyland as an example in examining how to utilize shuttles to move large amounts of people quickly. He noted shuttles could be used to connect BART to Todos Santos Plaza, to Park and Shop and potentially to a convention center, etc. He also noted there may be some potential to add parking at the backside of Park and Shop.

Robert Hoag mentioned two examples where streets met or missed the mark, for example Little Italy where streets close for restaurants on certain evenings which brings people out and creates a buzz of activity and then Santa Fe where although

busy during the day, the evening seen is rather dead.

Larry Gray – suggested temporarily closing certain City streets on a regular basis to achieve that level of activity and attract residents.

Vice Chair Grayson – noted there were a lot of great ideas he saw with the presentation this evening. He continues to like what he sees in terms of the potential along Grant Street.

Ed Andrews noted he wants to keep the vitality healthy; yet keep the businesses viable. He stated he is confident you can do both by maintaining a balance. He noted he listens to the leasing agents and what tenants are interested in and parking and access are one of those tenants are looking for. So he suggested you just need to maintain a balance.

Chair Leone noted that stores want convenient parking and suggested that the team look at parking, making people aware of the parking options and examine potentially the adding or modifying timed parking. He also noted that the City was looking at replacing the barricades on the south side of Todos Santos Plaza with a 4-foot tall wrought iron fence for safety reasons. Along with the fence, arch ways from either corner of the park over the diagonal walking paths are being recommended as entry points to the park. The (Housing & Economic Development) Committee will be making a recommendation to Council on September (3rd).

Jeff Woods stated that businesses leave when events occur because vendors draw business away so you need a balance otherwise the brick and

mortar businesses suffer and you don't want those to go away.

Chair Leone indicated that he thought the early California theme was appealing since it draws on the history of Concord.

Dennis Dorman then proceeded with presenting the Alternatives Development slides.

Robert Hoag noted that Alternative A is loaded with office; but you need to add more restaurants, retail and shopping or the workers will all go home in the evening. He emphasized what is needed is an anchor facility or anchor tenant with a strong presence to attract people as well as additional business that wants to be located near the anchor.

Carol Johnson noted that the economic feasibility study that EPS has been working on has revealed that Concord has a lot of existing retail, but much of it is underperforming retail. She noted that the study found that the City needs to reinvigorate retail with policies that will lead to redevelopment with higher performing retail.

Dennis Dorman responded that policies could require the first level of buildings in certain areas to be convertible such that retail can grow over time. Retail is not going to happen without additional population.

He noted, affordable housing to the level being requested by some may not result in retail increasing as that retail needs households with the adequate income levels to support that retail. The City needs to think about what can be not what is currently the case.

Adam Foster stated that he prefers Alternative B with the increased housing. He noted that both he and Chair Leone went to the "Off the Grid" vendor truck event in El Cerrito. He also noted more and more people are utilizing the internet for purchases. He stated that the internet has killed retail as it was 40 years ago and will continue to compete with brick and mortar retail.

Mr. Pinto noted that they have worked on various projects in the past with EPS and BART. He recommended looking at quality and ways to improve the performance of existing retail. He noted the City needs to be more strategic as we move toward the future and noted that the City is currently over-retailed. Too much reality can be bad; he noted we should be de-emphasizing ground floor retail and limit it to key corners and nodes. He noted in Berkeley for a time they required ground-level retail everywhere and that is a decision that is hard to unwind.

Chair Leone noted that he agreed with Mr. Eber in that the Downtown already has a large number of households that are considered low income. He stated the City needs to provide housing that will attract households with sufficient incomes to

support the retail uses.

Kathy Renfro suggested that we need to stop comparing ourselves to Walnut Creek. She suggested the City anchor itself in our history, highlight the uniqueness of what the City offers and focus on what attracts people to the City.

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Adam Foster stated that small scale retail can also be looked at as an attraction with boutique shopping and other similar shops similar to Pleasant Hill along Crescent Dr. He also noted that if you have a diversity of housing and a mix, that value of housing can be a benefit to the area.

REGULAR MEETING OF THE DOWNTOWN STEERING COMMITTEE FOR THE SPECIFIC PLAN

JULY 22, 2013

I. PUBLIC COMMENT PERIOD

Amie Fishman, representing EBHO and the CCSC, noted that the CCSC is interested in the process and hopeful that the downtown plan will meet the needs of a wide range of people so that it can support residents to be able to live and work in the same community, which serves to strengthen the community. She noted they support coordination of the downtown plan with the Reuse Area and some of the similar policies that were achieved with the Reuse Area. She noted that economic realities will change and that we need to look to the future in our planning efforts.

Clarrissa Cabansagan, representing Transform, handed out a document entitled "*Motor Vehicle Collisions with Bicyclists & Pedestrians (2002-2011) for the Downtown Concord Specific Plan Area – Draft*." (The map depicts all non-highway motor vehicle collisions with bicyclists and pedestrians. The two fatal incidents were collisions with pedestrians. She noted that there have been lots of conditions, particularly with bikes outside of the green frame (as shown on map). She noted the Downtown Plan should take the accident data into consideration to work to improve hot spots.

Matt Vander Sluis representing Greenbelt Alliance,

stated that they support a plan that strengthens the local environment, such that people can invest in the downtown by shopping. He noted he had submitted the CCSC platform at the last meeting. He also noted that minor reductions in car speeds can reduce pedestrian accidents by a 9-fold increase.

PUBLIC COMMENTS CLOSED

II. CONSENT ITEMS

Kirk Shelby noted that the Draft July 1 meeting minutes incorrectly reflect him as attending that meeting. The comment was noted by staff. A motion was then made by Darrin Walters and seconded by Kirk Shelby to approve the meeting minutes from the previous meeting, reflecting the modification. The meeting minutes dated July 1, 2013 were then unanimously approved.

III. DOWNTOWN STEERING COMMITTEE (DSC) CONSIDERATION ITEMS

Alternatives Refinement and Summaries

Senior Planner (Project Manager) Joan Ryan welcomed the Committee and briefly provided an update regarding the upcoming schedule, meeting dates, and next milestones in terms of document preparation and the potential for additional meetings in September. She then provided a brief overview of a Developer Roundtable Panel that was set up by the consultant to review the Alternatives and the comments and recommendations they provided.

She then reviewed the Alternative Summaries.

first reviewing the existing conditions in terms of housing, office and retail square footage. She then provided information on Alternative A – Job Focus, Alternative B – Housing Focus and Alternative C – Balanced Focus, noting the incremental increases for each alternative in terms of jobs and housing units.

Chair Leone opened the discussion up to the DSC for questions and comments and then opened the meeting up for public comment on the first item.

Kirk Shelby stated if you build up the population but then you want to be able to follow that up with modifications, is that still possible? He noted that much of the reason seniors and even younger people are interested in going urban is because of the proximity of services, retail and restaurants. If you are restricted in building additional retail that then he questioned whether they will still be interested? He suggested that the implementation be kept flexible. He also noted that some references to uses such as boutique retail can be in any of the alternatives.

Ms. Ryan responded that the importance of the Plan will be in the Implementation and Phasing Strategy to build in some check-in points in the timeline to gauge success along the way and make adjustments, as needed. The document is intended to be a living document that has implementation measures that are tracked and can be adjusted

along the way.

Ms. Johnson also noted that the City could use performance measures or metrics to track results and make adjustments along the way including certain triggers, as needed to ensure that the plan creates and maintains the vibrancy of the area but it will be a mix. She noted flexibility is the key.

Robert Hoag questioned whether anyone had read the paper this morning with the article regarding the multi-family project Avalon near Pleasant Hill BART ? (http://www.contracostatimes.com/ci_23696449/much-pleasant-hill-contra-costa-centre-bart-transit?ADID=Search-www.contracostatimes.com-www.contracostatimes.com) He noted the quick summary was that experts believe the biggest drawback to getting tenants to occupy that project is providing adequate parking for the ground floor tenants. The real estate broker consulted for the article stated the ground floor spaces were designed to fail, because they don't have the parking that retailers want. Mr. Hoag noted, we don't want to paint ourselves into a corner with such concepts, but have flexible policies built into the plan that we can monitor and keep our eye on.

Ms. Johnson, Planning Manager, noted that as we get further in the Specific Plan process we will be developing affordable housing strategies, but for now we are trying to select a direction toward overall uses.

Vice Chair Grayson – requested a clarification. So should we be looking at the alternatives as an

overall land use template that we can then tweak and adjust and further detail?

Ms. Johnson responded that was exactly right. Once a Preferred Alternative is selected the team would continue to refine in order to prepare the environmental analysis and then start developing strategies for implementation.

Kathy Renfro questioned how the Developer Panel was selected and whether they would be willing to assist the City further with the Preferred Development? .

Ms. Johnson responded that the developer panel was selected to include consultants that were not familiar with Concord and therefore not biased in any particular direction as well as one local consultant who previously worked for Discovery Homes, but currently works as a consultant. She indicated that the developers had indicated they would be willing to assist the team again within a few months.

Adam Foster thanked staff for arranging the developer panel.

Vice Chair Grayson noted that a lot of the land that is available in the downtown is former Redevelopment land. He noted that when the state took our Redevelopment funds they also took our land.

Matt Vander Sluis stated the theme of flexibility is important especially with respect to the City sites and what happens on those.

Robert Hoag questioned whether staff has involved

the airport and noted that we do not want to de-emphasize the airport as that is an important factor as an amenity to many businesses and can be an attractor.

Chair Leone stated the airport is a key to the downtown and an important feature that some businesses and office uses would take advantage of or consider when locating in Concord.

Adam Foster noted that heights as they relate to airport development are important to consider particularly around an airport. He recalled that in Washington DC the airport tied height to frontage distance so that you had a proportionate building.

Kirk Shelby suggested the consultant and team look at the surrounding context of the housing sites noted in the alternatives in terms of what is immediately around them when locating the housing. Some of these sites have challenging circumstances with highly travelled road on both sides. We may want to re-examine some of these locations. He indicated for example, he would not want to live between Willow Pass and Clayton Roads. He noted that Carmel has four lanes through its' downtown but most other downtowns have two or three lanes.

Ms. Johnson responded that the housing sites are intended as placeholders in terms of the amount of housing development desired. The proposed sites could be pushed or switched with others as long as the overall development intensity remains generally consistent.

Adam Foster noted that much of this will be infill housing though and so there will be the need to

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adapt to adjacent uses and respond to challenges with adjustments in design.

Housing Typologies

Ms. Ryan continued the presentation providing a sampling of photo examples for a range of housing product types and density levels including apartments, transit-oriented housing, mixed use housing, town homes and live work lofts.

Transportation Metrics

Ms. Johnson continued the presentation on transportation metrics including street typologies and definitions, transportation metrics, and the key takeaways for the three alternatives. The transportation matrix describes at a glance the dominant types of transportation facilities and the appropriate uses for each whether it be transit, bicycles or pedestrian usage.

Tim McCallian questioned whether the A, B or C columns within the Transportation Metrics table represent additional trips or is it a reduction to those numbers?

Staff responded that these were additional trips.

Tim McCallian questioned whether housing development within the Concord Naval Weapons Station was included?

Staff responded that no, CNWS trips were not included.

Kirk Shelby questioned is there information as to how far people are willing to walk? Secondly, BART's focus was to get riders to come east. Will

they be satisfied with an alternative with housing as the focus?

Ms. Johnson responded the generally people are willing to walk a ½ mile for a 10 minute walk. She also noted that BART is trying to balance its ridership. There may be other methods for BART to deal with additional riders making the western ride that could include adding trains or modifying the timing of trains. BART recently met with the City to discuss its kick off of a project to provide investments to existing stations and is looking to the City to understand their needs.

Larry Gray noted that the biggest challenge is traffic and suggested that we need to de-emphasize Willow Pass Road particularly by Todos Santos Plaza by narrowing or some other method.

Ms. Johnson noted that Willow Pass Road will be critical to access for the Naval Weapon Station as it is the only corridor that provides direct access from the south. She indicated the City could examine traffic calming, synchronizing or progression timing of the lights, but that the City needs to maintain or accommodate the existing volumes, particularly for the development that will be coming in the future.

Dave Campbell representing the East Bay Bicycle Coalition noted that the traffic corridors provide a huge challenge with traffic. He noted that he wants the streets to be safe and inviting and is currently also working with Dublin on their downtown. He noted that a 6 lane arterial of traffic has never been

possible within a downtown. People just do not feel safe. He suggested that the City needs to start balancing the trips and need to make streets safer. He congratulated the City on the OBAG grant it received and indicated he believes that (last mile) project will be beneficial to the downtown. He stated that with the protected bike lane shown in the OBAG grant, people will be recognizing Concord as taking a lead on this effort.

Ray Barbour noted that trucks are not shown on the facilities matrix. He spoke regarding Willow Pass Road and Clayton Road and noted that Willow Pass Road is a truck route and Clayton Road is also a truck route and this can be an issue to have truck routes undesignated or volumes reduced. He noted the consultant should look into this further.

Mr. Barbour also questioned what is the occupancy level of the high density housing?

Ms. Ryan responded that the occupancy levels of the two current projects along Galindo Avenue, both Renaissance and Park Central have been ranging 97% to 98%. Staff has not performed additional checks on occupancy levels of the high density housing west of Ellis Lake.

Chair Leone noted that Renaissance will soon be building Phase 2 of their project, based on the strong occupancy levels.

Matt Vander Sluis noted that those who live within ½ mile of BART or major transit are 10 times more

likely to use transit. He noted that is a great statistic to confirm that development at Concord BART should prove positive toward BART ridership.

Amie Fishman suggested that when you are in Todos Santos Plaza you don't feel the density of the Plaza tower; good design can be inviting and galvanize retail opportunities. She noted think hard about creating density that feels good.

Virginia Thomas noted the discussion of reduction in speed limit on Treat Blvd. at the Council meeting in June and suggested it may also be appropriate in the downtown and questioned criteria for reducing speeds.

Adam Foster suggested we need to figure out what kind of transit we want. Safety is important. He stated he has a goal of riding his bike more and is now riding to work in Danville. He stated he feels much less safe in Concord than any other area. He noted that Walnut Creek has made some efforts. He suggested that the City of Concord needs to make some drastic alterations and needs to eliminate some lanes in order to increase safety for bicyclists.

Tim McGallian noted other locations have separated bike lanes, recently went to Vancouver where there were good examples and it flowed well. For example, on Salvio Street the City has planter boxes near E.J. Phairs that separate pedestrians from the roadway. We could potentially use similar ideas elsewhere.

Adam Foster indicated that he recently visited Ashland, Oregon and he liked the way their main road from the freeway introduced you to the City

lowering speed limits along the road from 50 mph, to 40 mph, to 30 mph, to 25 mph and finally to 20 mph at the City core to let you know you are coming to a concentrated area.

He emphasized if you don't want to eliminate lanes, reducing speed is necessary to make people safe. In the morning, people fly down Willow Pass Road and Clayton Road. He noted that at those slower speeds you also provide more visibility to businesses as people are looking around to see what is there.

Darrin Walters noted that people use Willow Pass Road to cut through when traffic on Highways 4 and 242. If you make it uncomfortable for people to cut through with reduced speeds, then they will stay on Highway 4.

Vice Chair Grayson stated that the plans are showing a pedestrian priority zone (14 blocks) and Willow Pass Road as a pedestrian street on the Street Typology slide so this is recognition that staff is hearing the group. We can get into more of the details at future meetings as we refine the plan.

Adam Foster stated that the barricades along the south side of Todos Santos Plaza on Willow Pass Road are proposed to be replaced and although he is glad that the Council Committee is looking at solutions, but noted that he wonders if this would conflict with the pedestrian experience or curb side parking. He suggested the Committee look at some other options.

Vice Chair Grayson welcomed Mr. Foster to attend

the Council meeting Sept. 3.

Florence Weiss, DOWNTOWN MANAGER stated that a study of that location (Willow Pass Road at the Plaza) took into account the situation where if a car broke down would there be room to exist and there would be room for a car door to open with the fence there.

Kirk Shelby noted that opportunities in terms of underutilized parcels are out there. He suggested creating a nice couplet to allow for expansion of core downtown area, as time goes on. He suggested we can use features to enhance flexibility for the downtown. He recommends the ability to leave options open

Chair Leong stated that another example of ground floor commercial not working is the Renaissance project because there was not any parking. Retail needs parking. He also noted that the planters along Salvio provide some level of protection to the pedestrian.

Evaluation Criteria, Process, Tools and Alternatives
Vision statement

Carol Johnson then reviewed with the Committee a draft vision statement prepared by staff based on a review of other vision statements and discussions at prior meetings.

Amie Fishman noted that the vision statement doesn't mention housing specifically only indirectly and we may want to add a statement in that regard.

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She noted the vision statement describes an exciting place.

Matt Vander Sluis noted that the statement did a good job of honoring the work at Grant Street, but that it should be expanded to the entire pedestrian zone, but that it sounds like a place he would love to live.

Kathy Renfro suggested the last sentence should be the first. She also suggested that Concord should be noted as a destination with Grant St. as the gateway to the destination.

Tim McGallian offered he would like a replacement for the word festive, perhaps dynamic.

Kirk Shelby agreed with incorporating some language regarding housing. He also stated that we need recognize the concept of incremental monitoring or adjustments and flexibility. He also recommended adding the phrase "diverse intermix of uses" to create that synergy and stated that the plan needs to grow organically.

Adam Foster voiced that the vision statement was exciting and recommending adding a phrase to touch on healthy, active lifestyle.

Chair Leone suggested that an Early California look or theme should be added.

Kirk Shelby echoed the suggestion and thought perhaps at least a portion of the downtown could be coined "the Todos Santos District". He noted we

need to strive for an anchor.

Vice Chair Grayson stated that the Downtown with an early California feel would be supported.

Kathy Renfro stated instead of festive, an entertainment theme could be depicted through culture, theater, perhaps even with the fencing at Todos Santos Plaza.

Jeff Woods stated he would support the concept of a Todos Santos Plaza district for the downtown and that the Downtown with an early California feel would be supported. He liked it and noted the City would need to market or brand it.

Kirk Shelby noted a recent visit to Solvang and emphasized it is the whole experience that makes that downtown successful, but that there is a theme there. He suggested looking at other downtowns for themes and how they apply them.

Robert Hoag noted the old California roots and heritage build on that and stated Concord has not forgotten its roots.

Evaluation Criteria and Ratings

Staff then reviewed the criteria for evaluation and suggested to the Committee that each of the criteria would be examined in terms of which Alternative could meet each criterion the best. Staff had a matrix for the three alternatives listing the six goals on a white board (similar to that shown below) and worked with the Committee to evaluate each of the goals.

Based on that evaluation, the following ratings were provided (utilizing smile faces, straight or sad faces during the meeting to keep it simple). Staff then added up the smile faces for each alternative to get a total, resulting in Alternative B (housing) rating as the Preferred Alternative with 5 smiles, followed by Alternative C (balanced) with 2 smiles and then Alternative A with 0.

To evaluate it slightly differently, staff assigned

Table 8.1
Alternatives Evaluation Matrix

DSC-Ranked Order of Importance	Criteria	Concept Alternatives		
		A Jobs Focus	B Housing Focus	C Balanced
1	Increasing job creation	☹️	😊	😊
2	Enhancing business climate and expanding economic base	😊	😊	☹️
3	Intensification of uses and densities from current built levels	😊	😊	😊
4	Increasing BART ridership and efficiency of multi-modal connections	😊	😊	😊
5	Constructing housing projects for a mix of housing types and income levels	☹️	😊	😊
6	Promoting mid and high-density housing	☹️	😊	😊
Number of smile faces – Alternative B was Preferred		0	5	2
OR Through use of point system		☹️=3	😊=2	😊=1
Alternative B also voted as the Preferred Alternative		9	17	12

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points to each symbol as follows: 3 points to smile face, 2 to straight and 1 to sad face, and the results were the same with: Alternative A (jobs focus) with 9 points, Alternative B (housing focus) resulting as the Preferred Alternative with 17 points, followed by Alternative C (balanced) with 12 points.

The matrix and results are shown below.

REGULAR MEETING OF THE DOWNTOWN STEERING COMMITTEE FOR THE SPECIFIC PLAN

AUGUST 5, 2013

I. CONSENT ITEMS

A motion was then made by Kirk Shelby and seconded by Robert Hoag to approve the meeting minutes from the previous meeting. The meeting minutes dated July 22, 2013 were then unanimously approved.

II. DOWNTOWN STEERING COMMITTEE CONSIDERATION ITEMS

Preferred Alternative Review and Refinement

Senior Planner (Project Manager) Joan Ryan welcomed the Committee and briefly provided an update regarding the upcoming milestones, meeting dates, and activity of the consultant in terms of document preparation. She then provided a brief review of the Preferred Alternative, noting that the evaluation of the DSC during the last meeting had led to selection of the Alternative B (Housing Focus) as the Preferred Alternative. She then

reviewed the changes that had been made to the vision statement based on the comments received during the last meeting.

Planning Manager, Carol Johnson, then read the revised vision statement for the DSC and also noted that staff had extracted plan objectives for the Specific Plan project as a result of the vision statement. She then pointed to the handout provided entitled "Sample Strategies" and noted that the matrix was an example as to how staff is envisioning the overall organization for implementation tracking. She discussed the hierarchy of how the objectives would get broken down into strategies that support the overall objectives and the overarching goals for the project. Each objective would be supported by strategies, that is, breaking it down into incremental steps and the matrix includes Implementation Activities and Progress Indicators with targets and horizon dates for tracking.

Chair Leone questioned how an Early California theme would get implemented?

Staff responded that you would implement an Early California theme through Design Guidelines. Ms. Johnson noted that this was a good example of the type of strategy that could be included with an implementation matrix and suggested the specific strategy would be to prepare Design Guidelines with an Early California Architecture theme. She indicated staff has done some work in this regard already with the City's planning intern researching and examining Early California Architecture examples that will be shared at the next meeting.

Chair Leone questioned whether the same would be true of façade changes?

Ms. Johnson replied that this is something that would need to be examined in terms of a threshold for requirement. The DSC would need to decide how extensive of requirements we would want to have in terms of requiring a certain appearance, with what the threshold would be, and how much change we would want in the situation of rehabilitated versus new development. If you are just repainting, then we probably wouldn't require it, but if you are replacing a window then you may want to require them to adhere to the style. One idea would be to have a pattern book, so doors and windows and roof elements would all be within a picture dictionary type of approach. It would help facilitate when a small business owner may not want to hire a designer, but he could at least point his contractor toward what type of window style he needs to use.

Chair Leone opened the discussion up to the DSC for questions and comments and then opened the meeting up for public comment on the first item.

Kirk Shelby confirmed the word "authenticity" within the first sentence of the Vision Statement.

Ed Andrews stated that he thinks of remodeling a lot and he tries to do it in a way that breeds a contemporary look, he stated it might be tricky to blend his look with Early California Architecture and keep it contemporary at the same time in order to bring in new hot tenants. He noted it would be good to have examples and have something to e-mail to tenants. Sometimes he

noted he gets comments from prospective tenants that the building looks dated, as it is from 1988. Peets coffee was designed to have contemporary updated appearance specifically to bring in the new tenant. He stated you need to balance over time, as trends and materials can get dated... a contemporary Mediterranean or contemporary Early California appearance may still relate but you can have features that lend itself to the same style. He noted the idea is to give enough flexibility to give cohesion but not back yourself into a corner.

Ms. Johnson, noted Kirk Shelby as the architect in the group, could probably provide good input here, but the idea she noted is that you can pay your respects to a certain style without completely immersing in it. You want to remain authentic in the appearance with appearing fake.

Kirk Shelby noted over time trends and materials can fade, so the key is to provide a range you may have some of the same massing and approaches in terms of arches, and have some features that allow some flexibility. Idea is to give enough flexibility so that you don't tie yourself into a corner.

Matt Vander Sluis noted that it was exciting to be hearing the discussion

Tim McGallian questioned whether design guidelines are typical or difficult to include in a Plan?

Ms. Johnson stated that yes it is difficult because you have so many existing buildings and an existing range of architecture currently that span

decades to try to meld into cohesion. But she noted you could do such things as utilizing street furniture with a consistent theme or appearance to tie the downtown together, with benches, tiles, light poles, fencing for example, and using those to tie the downtown together, rather than having very specific architectural restrictions.

Tim McGallian questioned what about in the gas lamp district in San Diego? He noted many of the buildings down there have similar appearances done through awnings for example, that are similar color or other common features.

Ms. Johnson suggested it may be difficult to achieve certain looks with corporate or national tenants that may not agree to particular colors. Santa Barbara is a city where the look is more important to them and they can do that because they are such a sought after destination.

Ken Damj noted in the gas lamp quarter in San Diego you have a lot of buildings with similar characteristics and architecture, how difficult is that to achieve?

Ms. Johnson noted that when you have some large landholders it is easier to obtain a cohesive, similar appearance if that is what you are going after, but if you have a number of smaller land owners then it is more challenging. However, if you look too much all the same, then it looks like you are frozen in time and it doesn't look like the City is growing and evolving. You want to be able to determine what your balance is going to be and so you want to determine what are going to be the common elements that tie everything together. A lot of cities

do that through the street furniture, through the fixtures, through the way finding and those devices rather than having a really rigid design guidelines for all the buildings, but again that is a policy discussion and the devil is in the details. But this discussion will be discussed further as more of an implementation action.

Kirk Shelby noted that he likes what staff has presented and likes the idea of going from goals to objectives to implementation strategies. He noted it's real important that it be adaptable over time and that you show how the evolution may work.

Airport Height

Ms. Ryan then reviewed the Airport Land Use Map from the Airport Land Use Compatibility Plan and safety zones with the DSC and pointed to the areas within the project area that would be subject to further restrictions of the ALUC. She also described the allowable uses within safety zones 3 and 4 and noted that the Specific Plan would require review by the ALUC.

Commissioner Hoag questioned who controls the airport?

Ms. Ryan responded that the County controls the Buchanan Airport and that the Airport Land Use Commission is the interface that reviews upcoming projects and would review this project for consistency with the Airport Land Use Compatibility (ALUC) Plan. She noted that the ALUC Plan restricts development within the Safety Zones which surround the runways and defines the eligible uses

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within those zones. Therefore the Commission would review the Specific Plan for consistency with the ALLUC Plan. Fry's Electronics and the back side of Park and Shop were noted as being within a portion of the Safety zones.

Chair Leone noted that we like the airport because businesses view it as an amenity.

Introduction of Implementation Strategies

Ms. Ryan continued the presentation providing an overview of potential short term implementation strategies intended to be easy to implement and less costly with the goal of generating interest and excitement in the downtown. She shared some of those ideas including painting of utility boxes, murals, parklets, and use of vendor truck events for limited duration special events.

Ms. Johnson noted staff thinks a vendor truck event may be a nice way to draw people to the downtown where there is not currently a lot of activity such as Clay Alley to activate an area, and a good way to draw people in more to those businesses.

Richard Eber reminded the Committee that the Committee should be careful as we do not want to antagonize downtown merchants with the inclusion of vendors and cautioned the Committee on how they moved forward with the concept.

Ms. Ryan noted that the importance of the

Plan will be in the Implementation and Phasing Strategy to build in some check-in points in the timeline to gauge success along the way and make adjustments, as needed. She noted the implementation matrix will be key in this regard. She noted that the document is intended to be a living document that has implementation measures that are tracked and can be adjusted along the way.

Ms. Johnson also noted that the City could use performance measures or metrics to track results and make adjustments along the way including certain triggers, as needed to ensure that the plan creates and maintains the vibrancy of the area but it will be a mix. She noted flexibility is the key.

Outline of Specific Plan

Ms. Ryan reviewed the draft table of contents for the Specific Plan with the Committee and noted that it would become more detailed as the consultant proceeded through preparation of the Draft Specific Plan during August and September.

Chair Leone questioned whether the DSC would be able to review a copy of the draft implementation strategies, prior to the next meeting?

Staff responded that yes, the DSC would be able to review a draft, but that the timeline is going to be tight with the City's need to be able to provide the Draft document to MTC by the end of October. But noted there should be time for massaging language prior to the end of September. Ms.

Johnson noted that we will start organizing the objectives and implementation strategies under the relevant chapter headings, as we move forward. Under infrastructure analysis, for example, the team

can now start analyzing demand to determine if there may be some deficiencies and determine any necessary improvements as needed and what the phasing would be for those improvements.

Staff noted that based on the time, extra time was available for input on what they would like to discuss at the next meeting.

Adam Foster indicated that he was interested in a discussion of height and what building heights the DSC thought were appropriate. He noted that the General Plan and zoning could always be changed but questioned to what degree the Committee wants substantial change from the current fabric of the downtown and questioned are we consistent with the vision statement?

Ms. Johnson noted that we actually have already very significant height allowances in downtown Concord. Staff responded that currently the Development Code provides for heights on the blocks surrounding Todos Santos Plaza of up to 70 feet and most of the remainder of the downtown allows up to 200 feet. Ms. Johnson noted that the existing height limit of 70 feet may be one way we could incentivize developers around the park by offering increased height. She noted there may also be opportunities to provide incentives in terms of parking through reduction of parking requirements, or perhaps through unbundling parking for affordable housing.

Adam Foster indicated he would like to see more discussed in terms of parking and how it is managed in the downtown including private lots. More of a discussion of how we are going to

calculate parking demands for the downtown.

Ms. Johnson noted that the City currently allows developers to meet their parking requirement through the payment of an in-lieu fee within a limited specific area, and the project team could perhaps examine expanding the in-lieu fee district boundary to allow more flexibility with reductions to the need for parking spaces. She noted the creation of a parking management plan, may yet be another opportunity to optimize the existing parking spaces currently available with those created over time. Downtown office buildings could also be incorporated into an overall shared parking system such that they could lease out their spaces if a building finds they have surplus spaces.

Adam Foster noted that he would like to further examine street typologies in terms of widths for streets. He noted being multi-modal may mean getting rid of traffic lanes in some cases and he noted that is a very political issue, so worth discussing further.

Kirk Shelby stated he is interested in two things:

- 1) public space and 2) streetscape proposals.
- He noted that he walked around today downtown and suggested the DSC needs to look at how much volume the City wants to accommodate in a pleasant and safe way, and noted it is a tricky balance. In many areas of the downtown there is only room for one person to get by, so many sidewalks do not allow for the capacity of a more intensified downtown. He suggested you want to have a variety of ways to get people downtown

and so we have to figure out how you are going to accommodate them. He concluded there are a variety of factors that need to be looked at beyond sidewalks and parking, in terms of safety and overall physical image.

Adam Foster indicated he went recently to the BART fleet lab (Fleet of the Future Model Train Car, July 23-26) where BART unveiled future cars. He suggested that we should have a chapter providing a vision of how we want the City to interface and integrate with the BART station.

Richard Eber noted that he agrees with some of the comments of Kirk and Adam. He noted that the pending legislative Bill - SB 1 proposal by Mark DeSainier and Darryl Steinberg should concern everyone on the Committee as it alters the nature of redevelopment and that a lot of the parcels in the downtown may be taken over by the State. He noted that SB 1 is really rewriting redevelopment.

Matt Vander Sluis commented that it was visually helpful to see some of the types of short-term implementation items that may be considered and wondered if there may be similar initiatives for biking that could be implemented, perhaps some short-term pilot projects so people could get a feeling for some of these ideas without a long-term commitment.

Ms. Johnson noted there are items such as bike corrals, temporary markings for bike lanes, and other types of projects that could be implemented on a temporary basis to increase awareness within the City. She noted that the East Bay Bike Coalition has been coming to Concord to hold classes to

improved safety and that the City is exploring safe routes. A Share the Road campaign so that drivers become more sensitized to the existence of bicyclists on the road, may be another tool.

Matt Vander Sluis inquired whether the City was pursuing any grants in that regard.

She noted the City will not be pursuing new grants, due to staff capacity, until some of the existing grants can be wrapped up.

Jeff Woods wanted to commend the DSC for talking about the excess parking. Jeff noted there is a glut of parking some days, but on farmers' market days he stated parking is very difficult with the parking garages full and other spaces difficult to find. He noted if u want to park close to downtown it is very difficult and with additional uses this could become an issue and is worth discussing more.

Adam Foster noted we might want to look at having paid parking during highly attended events such that those who want to park closely will need to pay for it.

Chair Leone stated that the City conducted a parking study and determined that meters were not justified due to the amount of parking typically available, but he noted you could limit the curbed timed parking further and make adjustments as needed. He suggested that some City's are really increasing the charges for parking tickets in their downtown to enforce the timed parking.

Vice-Chair Tim Grayson noted there have been some fantastic comments this evening. He noted that if the City was going to charge for parking it

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would only be feasible for special event parking otherwise on other days there is an incredible amount of surplus parking, so you would not want to even think of changing right now. He suggested that the DSC needs to consider a policy that is very flexible and one where the policy can grow as development occurs.

He suggested bicyclists feel inhibited because there are not a lot of bikes on the road and so it does not feel safe. In order to provide bike corrals that may eliminate some parking spaces, there should be more awareness brought to the issue and he noted this can be done by using banners to create awareness or through other ways. He noted that we don't want to get to finely detailed at this point though.

Ms. Johnson concurred and noted that the Specific Plan will be broad based with goals and policies and that some of the implementation actions may be to study an issue further. She stated that such an implementation as creation of bike corrals or others could be studied via a subcommittee with a revisit to the broader DSC at a later date.

Ed Andrews stated that once we do a plan, it typically sits, and nothing gets done. He noted that to him the most important thing is the implementation that we move forward and then continue to massage the plan, as needed, if new conditions crop up and require quarterly or annual action items, as appropriate. But that we need to move forward.

Ms. Johnson noted the City uses a Performance Management Plan and it is structured with a goal or

objective and then action items, similar to what we are planning on with the Specific Plan and so that is a perfect model for what we are anticipating this plan is going to be.

Kathy Renfro indicated she liked Adam's comment about BART and inquired whether staff had met with BART regarding their plans.

Ms. Johnson noted that staff just had their meeting with BART regarding their investment framework plan for existing stations, but this was really a kick off and more of a temperature taking meeting where City staff shared our progress to date on the Specific Plan and remaining schedule and shared their plans are at a later date. However, staff will be having another TAC meeting on 9/9 where BART will be attending. So she noted staff is continuing to have contact and coordination with BART.

Kathy Renfro suggested that coordination on portraying the City's history through murals or art and incorporating that into way finding or in other ways, had been something BART had been open to previously.

She also questioned--Is there an Economic / Job-Creation part of the Specific Plan?

Ms. Johnson responded that we could add an Economic Vitality section.

Adam Foster noted that one idea for a short term implementation item may be to do a parklet or short term bike lane which would be a great way

to introduce the project to the community and provide awareness on these issues, as well as getting immediate reaction from the attendees. He suggested putting together a parklet prior to the Oct. 7 Community Workshop, perhaps on Grant Street which would provide more awareness for the concept as well as to generate interest for the workshop.

Ms. Johnson suggested a more feasible idea in the short time frame available could be a chalk art competition. She noted that parklets are a more significant project, creating more citywide coordination.

Chair Leone - Alternative could be bringing some examples through photos to share.

Adam Foster indicated he is not going to feel comfortable recommending these actions if he has not seen them in use. He wondered whether there was grant money availability? It would be good to see some of the public reaction.

Chair Leone noted his concern but indicated he was not sure of the practicality of it in such a short time frame.

Ms. Johnson noted that if we wanted to start planning for some of the short-term implementation items now for debut in the spring when the Draft EIR is being distributed for public review, that may be a more realistic approach.

Adam Foster noted that he could agree with that and volunteered to assist.

Tim McCallian questioned how do parklets get

made and whether the City had money for any of this?

Ms. Johnson noted that grant money will come available for some of the mid-term infrastructure items through Plan Bay Area funding, but suggested that for some of the short-term items being discussed those would need to get achieved through more of a grass roots type effort.

Tim McCaillan questioned how do parklets get made and what is the process.

Ms. Johnson responded that City of San Francisco has actually prepared a rather comprehensive process and approach toward parklets that is something we could model after, but it requires some time, because you are locating something within the public right-of-way. A business or organization, Rotary, Lions Club or Boy Scouts could take something like this on.

Matt Vander Stuis suggested a pop up park and also noted that the Annual Park (ing) Day this year is Sept. 20th [(PARK(ing) Day is an annual worldwide event where artists, designers and citizens transform metered parking spots into temporary public parks.)] and that perhaps the City could take advantage of the event an transition a few parking spaces. He noted Walnut Creek will be holding an event. He also noted that perhaps there may be an opportunity, as a Boy Scout Eagle Scout project to fundraise and create a more permanent parklet within the downtown.

A member of the public commented that there may be an opportunity to create a PBID (Property-based Improvement District) opportunity

Florence Weiss, Downtown Manager noted that the City had pursued a PBID in the past but that the issue was not dead and that the PBID may be an opportunity in the future She noted that a few of the property owners had been reluctant in approving a PBID as these were charges they would need to pass down to the tenant and the economic realities were not strong enough to where they wanted to pursue a PBID at this time.

Chair Leone questioned what will consultant be doing in terms of design? Will they be coming up with streetscape design?

Ms. Johnson noted the consultant will be preparing the Specific Plan which is a policy plan that will include streetscape design guidelines with street cross sections and design guidelines.

Chair Leone questioned whether we will need to apply for a grant in terms of some of the BART improvements?

Ms. Johnson noted the City will be telling BART what we would like and BART has some station improvement money but City will likely need to negotiate with BART. We want to make sure that when you come out of the BART Station that you have a more direct line of sight toward the downtown and up Grant Street, which would likely impact some of the parking spaces.

Chair Leone noted that in the past we had discussed providing an archway over Grant Street as it approaches Todos Santos Plaza.

Ms. Johnson noted that in the past the City had a public art fund, but those are quite limited now. She noted part of the implementation would be identifying the funding sources and financing necessary or perhaps a non-profit wants to take on a specific project. If we want enhanced programming and appearance of the downtown then we are going to likely need enhanced funding from the City to support the implementation of a number of strategies or look at creating a non-profit that can take on some aspects.

Community Workshop Discussion

Ms. Ryan reviewed the revision to the upcoming Workshop #2 date and venue with the new date scheduled for October 7th at 6:30 p.m. She indicated the workshop would be held at the same location as the first workshop, Salvio Pacheco

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Square, Suite 201, at 6:30 p.m. and thanked Jeff Woods for the use of his facility once again. She noted that the emphasis for the meeting would be in describing the Preferred Alternative to the public, the purpose and benefits, reviewing the planned implementation strategies and then the timeline for the remainder of the project. She noted that DSC members are encouraged to attend.

REGULAR MEETING OF THE DOWNTOWN STEERING COMMITTEE FOR THE SPECIFIC PLAN

SEPTEMBER 9, 2013

I. ROLL CALL

Nine members were present and two at-large alternates were also in attendance.

II. PUBLIC COMMENT PERIOD

Cynthia Armour, representing the East Bay Bicycle Coalition, made the DSC aware of an upcoming advocacy ride being planned for Downtown Concord to advocate for making Concord a more bike-friendly and pedestrian friendly Concord. The ride will take place on October 5th at 2 p.m. with a meeting point at the Concord BART Station. She handed out flyers noting that the ride will end at Todos Santos Square and those who wish to engage in further conversation after the ride will meet at E.J. Phair's Brewery (corner of Salvia and Grant). Further information available at ebbc.org/concord

PUBLIC COMMENTS CLOSED

III. CONSENT ITEMS

A motion was then made by Tim McCallian and seconded by Ross Wells to approve the meeting minutes from the previous meeting. The meeting minutes dated August 5, 2013 were then unanimously approved.

IV. DOWNTOWN STEERING COMMITTEE CONSIDERATION ITEMS

Preferred Alternative Review

Senior Planner (Project Manager) Joan Ryan welcomed the Committee and provided a brief update regarding the current tasks that staff and the consultants were working on, upcoming milestones, meeting dates, and noted the preparation of the Draft Specific Plan that the consultant is currently working on. She indicated the DSC has selected Alternative B (Housing Focus) as the Preferred Alternative and that refinements to that alternative were continuing. She then turned the presentation over to the City's consultants from Perkins + Will (P+W).

Project Manager for P+W, Dennis Dorrnan, provided introductions of his team members that were present including Prakash Pinto from P+W and Jim Musbach, Principal at EPS, their economic sub-consultant. Mr. Dorrnan began the presentation briefly reviewing the timeline and the upcoming environmental analysis, the bulk of which will take place between Sept. 2013 and March 2014. He noted that the team had brought forward the timing of Task 8 – Implementation based on the

interest and request of the DSC. He noted that they anticipated the environmental process to be straightforward and largely consistent with the General Plan EIR.

Mr. Dorrnan then provided a review of the Preferred Alternative, previously referred to as Option B – Housing Focus. He noted that ground floor retail would be emphasized on key streets. He also reviewed a Phase II plan for the long-term which included redevelopment of the Park and Shop Shopping Center that would be accompanied by two levels of underground parking. The area was shown with commercial uses on the western portion of the site and housing uses on the eastern portion of the site. He noted that the plan covers a 30-year timeframe and therefore they were including Park and Shop, though he noted there will be many challenges with its development.

Mr. Pinto noted that the overall development planned for the Specific Plan is consistent with the General Plan which are already very generous ranging in density between a FAR of 1.0 and 6.0, falling within the current thresholds. However, it was included for the purposes of the environmental analysis.

Mr. Dorrnan noted that the Specific Plan is making an effort to describe how the various spaces in the downtown would be knitted together.

Ms. Ryan briefly interjected noting that staff held a meeting with the Doris Court neighborhood (south of the BART station) on August 27th to review with them the progress on the Specific Plan and make them aware of the level of development being

shown for their neighborhood (Med. Density). She noted that 30 neighbors were in attendance and that all but 2-3 were strongly in favor of retaining the neighborhood as it currently stands (with low density zoning), as a single family residential neighborhood. She noted that current zoning could allow secondary units to be added to the existing single family units. She noted that development is being shown on the BART sites however.

Planning Manager, Carol Johnson, noted that there would be significant costs to go back into that neighborhood and upgrade the infrastructure for any additional density. Also, because the area is all in private ownership additional costs would be added there. She noted that staff is now showing the existing zoning within the Specific Plan. She indicated that what we do have now is a good contact list for the neighborhood.

Goals, Policies and Implementation

Prakash Pinto, Principal for P+W reviewed a summary of the preliminary goals, policies and implementation strategies for the Downtown Specific Plan. He discussed objectives including "Protect and enhance Downtown Concord's authentic character and historic assets, Promote high quality infill development that successfully integrates new with existing development; and Reflect early California architecture in the design of new buildings, Promote sustainable principles; Provide a variety of living opportunities through a range of housing types and prices; Create a thriving local mix of boutiques, restaurants, and cultural destinations; and Develop a green network of pedestrian friendly streets to promote healthy,

active lifestyles. Policies and Implementation strategies were summarized for each. He noted the team is looking at the Silver standard for LEED to promote sustainability for any new buildings. He noted the project team is interested in getting the DSC's input on the implementation strategies.

Mr. Musbach noted the importance of making the downtown more developer-friendly and indicated clarity of development process and any speeding up of that process is very attractive to developers in deciding whether to work within the City. He noted you don't know if you are going to write down land costs until you are negotiating with a developer.

Mr. Pinto noted there are concepts they will be covering within the Design Guidelines to provide a coherent aesthetic. He noted, based on the discussion with the Developer Panel, one key item was having flexibility in meeting the parking standards.

Mr. Pinto stated he would like to broaden the vision of developers that would be willing to come to the City. He suggested that permit fees can impede progress – that the City should examine fees and incentives. He noted that an expedited time frame is viewed by developer as very helpful. He emphasized that creating additional housing would improve vitality and safety with more people out on the street. He also raised the concept of supporting art interventions to serve as a catalyst toward change and vitality in the downtown and reaching out to satellite opportunities with cultural institutions may be a mid to long-term idea to explore.

Mr. Musbach noted adding the housing first and

the residential piece of this is really key toward attracting new businesses and employers. He also noted the ability of property owners to do a Property-based Improvement district where they assess themselves for specified improvements and they would see a return on value over time as more vibrancy is created.

Mr. Dornan noted the Green Network would emphasize those areas as pedestrian friendly streets and the team would intend to implement strategies to promote upgrades for Salvio Street, in addition to Grant Street, since this was the City's historic main street. He then reviewed the Street Typologies and noted the recognizable hierarchy stating that there were no plans to eliminate lanes of traffic. He noted the team is looking at a shuttle circulator. He noted that the Preferred Alternative will have a greater impact on BART, but less so on the streets. He noted that we also have a slide where trucks should go. Mr. Dornan then reviewed the Housing typologies demonstrating the types of housing that could be produced ranging from townhomes, live/work units, apartments and mixed-use transit oriented housing. He noted that the Draft Specific Plan would be released at the next meeting.

Chair Leone requested whether there were any questions of the Committee.

Vice-Chair Grayson confirmed with the consultant that all of the land uses are falling within the current zoning and noted that the zoning currently allowed is quite generous. He then confirmed his understanding that the zoning shown within the

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preferred alternative of the specific plan does not conflict with the General Plan but only enhances the General Plan. He questioned what the green on the plan denoted on the Housing Focus slide and confirmed through the consultant that the green denoted is enhanced sidewalks not removing any parking lots or creating any new parks. He noted that we need to be clear with the public that we are not proposing to rezone with the Specific Plan.

Mr. Pinto responded that the green frame and other green areas on the plan reflected walkability improvements, including enhancements to streetscape and landscaping, not the creation of new parklands. This will be something clarified at the Community Workshop. *Mr. Pinto* also confirmed that the plan is consistent with the current zoning.

Vice-Chair Grayson questioned what is the ability to maintain that flexibility in terms of uses? He emphasized the team needs a way to maintain flexibility but to provide certain policies to encourage particular uses, with housing in particular. He then inquired with respect to the transportation matrix and asked how it aligned with the street typology? *Mr. Grayson* also stated that he would like a stronger pedestrian/bike presence in the downtown.

Mr. Dornan noted the network shown is that which is recommended by the traffic consultant. He noted that the plan is not eliminating any lanes, but is planned to incorporate the proposals for the two OBAG grants for the Last Mile to BART and Detroit Avenue. The amount of pedestrian improvements being proposed are not evident at this scale, but they are being included within the Specific Plan.

Mr. Pinto applauded the City for moving forward with the Complete Streets adoption effort. Those principles are geared toward the pedestrian with walkability and public realm improvements.

Mr. McGallian noted he would like to see the DSC be more aggressive with Grant Street in showing specific uses and taking a harder line since there is more opportunity there between BART and Todos Santos. He suggested focusing on Grant Street and up and down Colfax for the short to mid-term.

Mr. Dornan noted that Grant St. could happen incrementally. The things learned from the developer panel were that Park and Shop is close to the freeway and based on its size will be attractive to developers down the line. Very few parcels that large are available close to the freeway.

Larry Gray questioned what is the green shown at Willow Pass Road? Staff responded that the same number of lanes would be included but some traffic calming could occur there so that it won't feel like a freeway.

Kathy Renfro questioned what happened to the transition of one-way streets to two concepts.

Ms. Johnson noted that through the traffic study, staff determined that it would result in delays on Concord Ave. and Galindo Street and thus that was marked as a intersection study to be scoped at a later date, since there is not adequate funding in the current scope of work to further study that issue. She noted the City-wide bike plan will also be looking at further improvements and that will be initiated in Feb. 2014.

Kathy Renfro questioned whether the consultant had the ability to do the traffic study through the 3-D model?

Mr. Dornan noted that the traffic consultant has continued utilized modeling as a tool in coming to their conclusions regarding transportation. He noted that they are also utilizing a 3-D rendering program which assists with understanding shade and shadowing.

Adam Foster questioned the potential impact on schools and noted that he thought Wren School may be impacted. He noted safe streets to schools as a consideration.

Richard Eber noted that schools are already impacted.

Ron Leone noted that when it comes to the schools, that it is the responsibility of the school district to determine how best to accommodate growth and he noted in his experience school districts are happy to have an increase in housing. Growth is not viewed as a problem because more money is generated and they can determine how best to accommodate students or to modify school boundaries as needed.

Jeff Woods noted that the vision indicates we want a thriving economy but under LU-3 it is noted that we want to retain 50% affordability and that does not seem in line with vitality. What the affordable housing strategies were and how do those lead to vitality in the area?

Ms. Ryan responded the implementation strategies noted within the handout and specifically described

as item E under LU-3 to retain 50% affordability are based on the current study which found the 64% of the units in the downtown are affordable units now. This strategy recognizes that new units will be built likely bringing the affordability level down in the short to mid-term; so the strategy intends to track affordability annually to limit the reduction in affordability to 50% through 2022. In addition, she noted the proposed monitoring of affordable units over time and the current monitoring of multi-family units through the City's multi-family inspection program.

Ms. Ryan noted that the City already has an inclusionary housing program and a density bonus program on the books that address affordability.

Ron Leone noted his perception is that if you want to increase your residential areas could you give the opportunity to develop commercial as well?

Mr. Pinto noted that yes the Downtown Mixed Use would allow that.

Ron Leone noted his concern earlier when hearing about the worries of the some owners within the Doris Court neighborhood and stated people need to understand that we are not going to be taking out any houses, they would have to be purchased by a developer so the only people being displaced would be those who are choosing to sell. Developers would be buying people out; we are not talking about eminent domain.

Kathy Renfro questioned whether it was just based on the neighbors, she noted if it was just an informal meeting, we could have a formal meeting.

Richard Eber stated that he is not sure that housing with very little parking is how the current residents of Concord view the future of their city and how it jives with how they want their downtown to be. Do the residents want this high density housing? He noted that he sees these assumptions for reduced parking but questioned whether that what the current residents want.

Mr. Pinto noted that parking is something that we are taking into account. All cities along the BART line have reduced parking standards within proximity to BART. Reduced parking standards within the ½ mile of BART are already within the City's Development Code and these are not being created new within the Specific Plan.

Richard Eber noted we do not want to make the same mistakes as the Avalon project in Pleasant Hill. I don't think we should turn our backs to the residents of Concord.

Mr. Pinto noted that developers are not going to build something that will not sell.

Ms. Ryan corrected an earlier comment noting that the City is not considering charging for parking, the comment was intended to refer to timed parking.

Ms. Johnson noted that we have received some requests from the TSBA to re-examine timed parking and in particular lengthier parking so that people are not parked for four hours. She noted that parking maximums can be a deterrent to development. The team also is looking at other traffic management options such as ride sharing, reduced dollars for transit passes, etc.

Mr. Pinto noted that he is on the Berkeley Zoning Adjustments Board and since they have reduced the parking standards within ½ mile of the BART station the City has experienced interest in development that is 500% over what they have typically seen. Enforcement is a rather marginal cost since it is already in place. Although you are considering the existing residents you also need to consider the people who will move to the downtown.

Ron Leone noted that now you have scanning devices where you just drive by, so technologies are more efficient and cheaper so he is not as concerned with modifications to timed parking.

Kirk Shelby – stated right now I look at it and it seems like everything is residential do you really want everything residential you may want residential priority, but why all residential I would provide more opportunities for ground floor commercial. Residential at the ground floor is not really great either.

Mr. Pinto – noted he did an analysis in Berkeley and over 75% of retail has been vacant for years, what we are finding is that the retail needs to be focused more toward nodes.

Tim McGallian – If I recall, we examined the issue of ground floor commercial during the last Development Code Update.

Ms. Johnson – Noted yes we did and that you want ground floor heights that are taller so that they can accommodate commercial over time. You

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want buildings that can age and are adaptable. This plan will have performance measures in it with monitoring to continue tracking of progress.

Mr. Dorman – One thing not being shown is the commercial vacancies which represents a lot of area and is why it looks so predominant with residential.

Kirk Shelby – There have to be sites that are more conducive to higher density. Is it possible to try to target the higher densities and lower densities even in this scheme? I believe there are sites that lend themselves more toward one type of use or another. He voiced concern that there may be too much flexibility. He noted you don't want to have too much density in one area or the other.

Mr. Pinto noted that the plan really looks at the BART and opportunity (city-owned) sites near BART as the catalyst, priority sites and having some density around Todos Santos. At the same time you want to allow the market to dictate some things. The Development Code currently allows the higher density.

Mr. Pinto – As a reminder, the genesis of the plan is really through MTC and promoting housing that is transit-oriented targeting opportunities

Kirk Shelby – Concerned that there may not be the support and services necessary for residential such as grocery other than Safeway, Ranch 99 which is a specialty market and the discount grocery.

Mr. Pinto noted he is not so worried about that because this plan is representing new residents that will be added and therefore new customers,

which means that commercial businesses will follow. Trader Joes and Whole Foods for example have gone in recently within multi-family complexes.

Ron Leone asked whether there were any additional questions of the Committee and if not he would be opening the discussion up to the public. He then asked for speakers from the public.

Ray Barbour – commented comparing Berkeley to Concord is not a good comparison; that it is applies to oranges. He noted that we don't have a university down here and Concord may be a little more cowboy. Also Willow Pass is a truck route, but that truck route ends at East Street, so East Street and Galindo that's not a truck route. Any streets proposed as truck routes that are not currently, will have to be built up to truck standards.

Mr. Dorman notes that the truck route information was not brought on the slides they have, and the transportation consultant has provided for an alternate route, but will be included in the Specific Plan.

David Bowdly noted he is representing the owners of 2400 Willow Pass Road (Blockbuster and Bank), represented as Letter "M" on the map. He also noted he is very familiar with Safeway. He noted his client is a bit confused, showing residential envisioned on his block when a variety of uses are allowed. In Walnut Creek, they struggle with the same, so don't lose sight that you still want to bring your suburban people into the downtown. He noted I do not see an opportunity for a hotel, or cultural institution that you may want to bring. These owners had not heard about the project. The

diagram is confusing to the public, for example it is not clear to the public what residential for example means.

Matt Wilson stated you may recall the presentation I provided on Grant St. I have walked Grant St. many times and there are delays at the lights for pedestrians along there, so maybe it is an issue of timing. He noted, if there were a heavily themed street, like Bourbon Street, like Pier 39, like Old-Town San Diego, there is nobody who wants to rush through those spaces. As more congregate, more retail spending occurs. I know I am willing to drive across the bay once a year to Pier 39 to participate in that experience.

Cynthia Armour noted that you want a network of streets that will allow anyone to bike safely. She noted she had some questions with Clayton and Concord Blvd., but noted that the OBAG grant stops at Sutter St. so had concerns with riders being thrown out to areas where bike lanes just end.

Mr. Dorman noted that the Transit Streets have Class 1 bike paths but noted the bike in Ms. Johnson noted the current bike lanes proposed where the one-way couplet starts, between Sutter and Market St. we have much more constrained space, so that will be studied in more detail through the Bike Study, following this project.

Ms. Armour – stated she had not seen anything regarding bike parking and suggested density bonus for providing indoor parking.

Ms. Johnson - noted that the City does have new

bike parking requirements within the Development Code, but it applies to new projects and we have not had any new projects yet where it is applicable to be able to try it on for size. But that would be an area where we could use input.

Ron Leone noted he would bring it back to the Committee for comments.

Mr. Foster thought staff did a great job putting our thoughts into the vision statement and into the implementation strategies. He noted that staff has captured our thoughts.

Vice Mayor Grayson – Second the thought on the hotel and convention center. Legitimate issues were raised regarding parking and it is a fine balancing act where you have managed parking that keeps mobility at a maximum while making it possible for projects to pencil out in their costs. He stated he really likes the flexibility, as a builder we are not going to build something that is not going to sell. In some things being suggested, we are already doing some of these things so that is encouraging. The current flexibility of our zoning is important. The Committee has really rounded out this study with the range of opinions provided. Staff should begin a plan for property owner outreach and business/tenant outreach as long as cost effective and within the budget of the project.

Kirk Shelby – while we are providing the basic bones, the actual branding of Todos Santos, we can borrow from other areas that are successful, just spent some time in Santa Fe, a lot of walking, landscaping, pocket parks and vibrancy, it was fabulous. We want to encourage bicycle traffic,

but bikes and pedestrians don't always mix. He noted we want to make sure that you have consistent infrastructure in particular with signage and walkways. Create a fabric creating a sense of place.

Tim McGallian need to recognize we are still a suburban community. He also noted they will still need cars and residents of Concord will use their cars to get to the downtown. He noted the TBID with the hotels and loves the idea of a downtown hotel, the TBID can assist in letting people know we are on the map.

Adam Foster – In the implementation strategies would like to see a pilot column for 2014, given that we already have 1.1 million for OBAG Last Mile, Detroit Avenue, parklets, outdoor seating and outdoor dining areas and connecting the Galindo House and Masonic Lodge with the rest of downtown, and streamlining of second units and reduced front yard setbacks for homes with

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porches.

Ron Leone noted that this was really a good meeting and seeing the time we will adjourn until the Community Workshop on October 7th.

Implementation Strategies (Short and Long Term)

Comments noted above.

REGULAR MEETING OF THE DOWNTOWN STEERING COMMITTEE FOR THE SPECIFIC PLAN

OCTOBER 15, 2013

I. ROLL CALL

Ten members were present and two at-large alternates were also in attendance.

II. PUBLIC COMMENT PERIOD

S. Ardrey indicated he was a cyclist, living in Concord since 2000. He spoke in support of the increased use of bikes for transportation due to cost, health and environmental reasons. He noted that more bike facilities were needed in order to get across town safely. He stated he would like a protected bike lane from Salvio St./East Olivera Rd. to Salvio St./Mira Vista and then west on Willow Pass Road to allow people to go the Willows Shopping Center and Sun Valley Mall. He noted that many other communities are ahead of Concord in terms of bicycle infrastructure and that Concord needs to be more progressive in this area. He also noted kids need to be able to ride bikes to school.

PUBLIC COMMENTS CLOSED

III. CONSENT ITEMS

A motion was then made by Tim Grayson and seconded by Ross Wells to approve the meeting minutes from the previous meeting. The meeting minutes dated September 9, 2013 were then unanimously approved.

IV. DOWNTOWN STEERING COMMITTEE CONSIDERATION ITEMS

Summary of Public Workshop feedback

Senior Planner (Project Manager) Joan Ryan provided a brief summary regarding the recent Community Workshop #2 held on October 7th at Salvio Pacheco Square building, Suite 201. She indicated the workshop was attended by approximately 85 residents, property owners, service providers, housing and bike advocates and business owners. She then reviewed the feedback received during the breakout sessions following the presentation provided by the City's consulting group of

Perkins + Will. The break out groups included those on Land Use, Transportation, and Implementation Strategies. She noted that the detailed comments were also provided to the Committee with their hand outs and would be posted to the website.

Chair Ron Leone then opened the it up to the Committee for questions and indicated after the Committee he would open for comments by the public, followed by discussion by the Commission.

Larry Gray inquired whether, based on the

workshop, if there were any good suggestions regarding traffic calming?

Ms. Ryan noted there were comments along the lines of reducing speeds and potentially narrowing or eliminating lanes, so that cars are not so dominant, and then for pedestrians generally with regard to improving and expanding sidewalks for pedestrians and timing at lights.

Richard Eber stated on the topic of "too much capacity for cars" (referring to written summary) is this reflective of the people who showed up to the Community Workshop or do you feel that this is shared by the majority of the public?

Ms. Johnson noted that this summary is based on the statements that were found on the sticky notes on the boards from the Community Workshop.

Richard Eber noted that so perhaps this does not have the larger depth of public opinion.

Adam Foster noted these are people who took time out of their day who are passionate about an item.

Joel Devalcourt representing Greenbelt Alliance and the Community Coalition for a Sustainable Concord noted he was glad to see broader community support for the housing option and much of the work that the project team has been working on. He thanked the City for their work at the community workshop and noted the support during the workshop for mixed income housing and the support for green streets and creating a walkable infrastructure. He indicated it was wonderful to see support for improving the safety of downtown pedestrians and encouraged more robust strategies

- along with shared parking and strong parking management.
- S. Ardrey noted his support of the plan, and his support of a strong link between Todos Santos Plaza and Concord BART because it is not clear once you get off at BART.
- Adam Foster said he enjoyed the workshop and seeing how many people attended and stated his support for holding another public workshop prior to environmental analysis to communicate to the public the comments heard during the October workshop and if and how those comments would be included into the Draft Plan.
- Kirk Shelby noted that during the Workshop he spoke with a woman who lives close to the downtown area who had concerns regarding the transitions between the existing single family and the newly proposed multi-family denser areas. He advised that the transitions are something the Committee needs to continue to consider. Mr. Shelby stated that the Committee needs to continue examining how we get safe streets. He noted that the City needs to provide adequate capacity on streets meant for vehicles and not compromise those corridors with bike traffic. He noted the mixing of the two is not a good situation; he indicated finding appropriate streets for the bike lanes is the key.
- Robert Hoag noted that the residents he is speaking to in the community are indicating that anything that impedes vehicular traffic is not good; people will continue to want to use their cars within the City. He noted they are not opposed to bikes.
- But, he noted that we need the correct balance and bike and pedestrian improvements should be built in appropriate locations, primary vehicular corridors should remain.
- Adam Foster stated the need for safe streets, in particular based on his experience with his family walking and biking in the downtown. He noted that the City does not need three heavily travelled vehicular corridors in the downtown. He noted that Concord has some of the worst bike and pedestrian infrastructure within the downtown and that if the City does not make improvements the City is not going to be able to attract the younger demographic that likes to live in an urban setting.
- Robert Hoag stated that he is not saying no bike lanes, he is saying that they need to be located on the appropriate streets.
- Ed Andrews noted that it doesn't have to be one or the other, it needs to be balanced. Businesses won't locate if their customers cannot get to the downtown and park then we are not going to get the downtown shoppers we want.
- Tim McGallian stated the City is not a true urban environment; we are still largely suburban and need to recognize that. Many of the people who live here do not work here and that still needs to be recognized. He noted that we still need to be able to move cars through the city more efficiently and noted that we need that balance and provide separate routes so that they are not battling each other.
- Ross Wells stated that Clayton Road is a primary corridor through the entire City and out to Clayton.
- Any modifications to Clayton Road as a vehicular corridor will present a difficult challenge.
- Adam Foster noted the thing you do to address congestion is to create an environment to make Concord more of an employment hub, so that more residents can work here. He then stated that if you only give the option of driving that is all that people will do. He emphasized the City needs to provide other options through safe bike routes and pedestrian walkways in order to attract the younger demographic and the younger workers that we want. He stated he is all for providing separate streets for bikes and cars. He stated our land banks are our right-of-ways and we don't seem to be willing to give up any traffic lanes for safe streets.
- Richard Eber stated a lot of what we are discussing is our vision for what the future will be. He noted that I think we can all agree that we don't want something like what is over at Pleasant Hill BART, and we can't will the success of businesses based on faulty assumptions. We need to decide do we want something like San Francisco with the congestion that comes with that. If we are not providing adequate parking at multi-family residences, it is a leap of faith that people will come and buy. He questioned whether we are to assume that people will willingly give up their cars. He noted bicycles are not more than probably 1% of the transit option used within the City. Do we want to congest our major thoroughfares trying to accommodate bikes? Are people going to shop using bikes? He asked how are residents and visitors going to access retail services and jobs. He

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noted job creation can really not be legislated.

Kathy Renfrow questioned whether the comments from the workshop reflected residents opinions, we need to be careful as to whether the workshop comments really represent Concord residents? She noted that we have held many workshops where younger residents attend and bike and pedestrian issues come up and also that most do work outside the City, but would work here if there was a comparable job available. She noted that the Committee needs to remember that the CNWS traffic will be coming and that will need to be accommodated.

Bob Hoag contemplated where other commuter traffic would go if not through the downtown. He noted that Treat Boulevard is already excessively used. Every stop light between freeway and Oak Grove was the same with cars backed up from intersection to intersection. When thinking about commuter traffic, there is nowhere else to put it. Kiker Pass Road also is already heavily used. He noted that he worked in B of A complex in the early years and many of the workers early on were coming from other areas and loved it due to the reverse commute. He then noted, people do not necessarily want to live where they work. He indicated he has travelled to many locations that have fabulous transit systems and the key is ease of use and timing. The key is public transportation that is convenient enough, with higher frequency both trains and busses where you don't have to wait for more than 5 minutes.

Tim McGallian noted that for some people, they have to have their cars for employment because

there do not have other options, based on their work requirements. He indicated that his base of operations is actually in Texas, but that he travels frequently to San Jose and so it is not practical for everyone to use transit, depending on your type of employment. He emphasized you need to understand the type of businesses that you want to attract and those that would want to locate here and why. Need to understand the type of cross section of businesses that you want to attract to facilitate some of those companies to come here. Bio tech or other tech uses may be good to investigate and pursue.

Adam Foster stated he was very happy with the great conversation that was occurring. He noted that the Committee needs to remember that most of Downtown Concord is already relatively affordable and "affordable by design" and indicated that this is why younger people are wanting to locate in Concord. However, he cautioned, we need to retain young professionals by becoming more urban, otherwise they are going to move to other locations that are more urban. He noted that looming growth out at the Concord Naval Weapons Station, and the traffic associated with that development, does not have to occur; it can still be designed with transit in mind; perhaps only designing with one car garages rather than two. He stated there are other options out there to consider such as electric bike share. He noted if you build fewer big roads, people will find other options. He stated right now there are people that do not live in the City that utilize concord roads just as a cut through and the City is accommodating them. He noted that the City has a traffic consultant that is saying that you can reduce

lanes on Willow Pass Road to accommodate bike lanes, and questioned why are we then supporting three arterials through Downtown?

[June 20th, 2013 Fehr & Peers memo excerpt – "On Willow Pass Road, a road diet has been identified as a potential measure at several community meetings. Road diets are ideal on four-lane roadways carrying upwards of 15,000 to 20,000 vehicles per day. On roadways with average daily traffic volumes between 20,000 and 25,000 there is a greater likelihood that traffic would divert to alternate routes. Based on the level of daily traffic on Willow Pass Road, a road diet would likely result in traffic diverting to parallel roadways, including Clayton Road and Concord Boulevard. With a road diet, Willow Pass Road would have limited ability to accommodate traffic growth, whether from the SPA or regional growth".]

Larry Gray noted that there is a lot of outside influence and their feedback was evident at the community workshop. He noted that Treat Blvd. is extremely congested. He noted that bus rapid transit (essentially a BART on wheels) may be an option within the City, for example for use on Treat Blvd. and Clayton Road to improve the service levels. He stated, we need to try to come up with a plan and not get too bogged down by things, adjustments will need to be made along the way.

Chair Leone concluded the discussion noting that he thought it was healthy to have this roundtable discussion with some divergent opinions and hear each other out. He indicated that he supports

more walkability and bike improvements but in the appropriate locations and noted that the City still needs to maintain its traffic flows. He noted he believes that both can be accommodated. He discussed a conversation with Ray Kuzbari, the Transportation Manager, and discovered there are some excesses on Clayton Road where there may be some opportunities.

Refinements to Downtown Plan

Ms. Ryan briefly discussed the updates with respect to the environmental analysis. She noted that based on the Preferred Plan the Committee is moving forward with, the project team is able to move forward with preparation of an Addendum to the General Plan EIR, rather than the Supplemental EIR originally scoped for the project. She indicated the EIR consultant had advised that because the Preferred Plan does not require a rezoning, and the level of traffic is consistent with the original General Plan and because the City already has an adopted Climate Action Plan, the City is able to move forward with an Addendum, which would allow for some savings which could be used toward additional outreach. This would also reduce the amount of timeline allocated for the project. She then reviewed with the Committee, the items the project team was aware of from the previous meeting that required modification on the graphical land use plan. She noted the team would update the green spaces on the plan and clarification that those are not public open space areas. She also noted that the "green streets" needed clarification through the legend and finally that a better visual connection between Todos Santos Plaza and

Concord BART would be shown. *Ms. Ryan* noted that the project team would be making those updates through the next revision of the plan, but they would not be reflected in the version the Committee would be reviewing the next day.

Ms. Johnson noted the team rather than referring to a Preferred Plan would now be referring to the Preferred Land Use Strategy to provide clearer messaging that since the existing zoning allows a range of uses, we want to be clear that this is a strategy.

Tim Grayson suggested modification on the land use graphic using the term "greenways" or "greenbelt corridor" rather than open space within the legend.

Implementation Strategies Performance Measures and Monitoring

Ms. Ryan passed out and reviewed the revised Implementation Strategies which she indicated would be included within the Specific Plan. She noted that this would largely be how the project would be implemented and combined with the performance measures and monitoring would be how we define and track the success of the Plan's implementation. She briefly discussed performance measures, tracking and monitoring and provided a few examples of tools that can be used both quantitatively and qualitatively. She noted that performance measures can be used to measure the success of the plan. The City would likely implement tracking using a baseline from which to move forward to compare growth, ridership and other factors which is planned to occur for

implementation of the plan.

Ms. Ryan then indicated that staff would be routing to them the Draft Specific Plan later in the week for their review and comment by November 15th. Staff then reviewed a number of the strategies with the DSC under the "Economic Vitality" objective to provide an example of the types of strategies being considered. She indicated that during the Committee's review of the Specific Plan, she would appreciate a special focus on the review of the implementation strategies. Staff noted that the document was in a pdf, and probably would not allow on-line editing.

Ms. Johnson noted that perhaps we could turn this into an editable document or a survey for the DSC to report back. She indicated the project team will probably be finished digesting all of the comments received by February and that is the time at which we would probably hold the next DSC meeting, prior to the environmental document coming out with probably a follow up Community Workshop in March and then a final meeting in April prior to going to the Planning Commission and City Council for the adoption.

Ms. Johnson then noted there are a lot of implementation actions and so we may want to identify a subset of the DSC that works toward tracking of the implementation strategies into the future. We will also need to identify who is going to be responsible for making sure that the implementation actions get done, as we continue to

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move through the process.

Tim Grayson suggested that with the implementation strategies the short term strategies should be targeting 2014-2017, rather than 2015, as we do not want to wait to implement. *Staff agreed.*

Design Guidelines and Architectural Character

Ms. Ryan then described that the Design Guidelines that would be included within the Specific Plan would provide guidance for determining the architectural character for future projects. This would be done through guidelines on urban form, massing and character, setbacks, the definition of ground floor treatment, parking and servicing, private open space and sustainable practices. She then shared four examples related to Early California architecture and noted that the project team is headed in this direction with respect to architectural character.

Ms. Johnson noted that there are not too many examples of larger buildings with this style, but these examples show how you could transition with higher buildings in the background, but stepping down to a more approachable scale at the corner.

Adam Foster noted that he liked the treatment.

Ms. Johnson noted that the team wanted to check in with the Committee and see if we were on the right track with the images presented.

The Committee agreed that the architectural slides better represented their impression of the Early

California theme that they believe is appropriate for the City.

Bob Hoag stated that he felt the Performance Measure slide (example Portland, Oregon with the quantitative plan performance targets) was powerful because it was so concise and something similar to what the Specific Plan should utilize.

Ms. Johnson noted that we also have an example within the City's Climate Action Plan with a coordinator noted for each objective.

Kathy Renfrow indicated that we need to include and focus on economic strategies and how to connect Concord regionally, not just with the Concord Chamber of Commerce and the TSBA. She noted we need to continue to think regionally, especially with job creation.

Adam Foster – indicated he would like to see more strategies regarding transportation and that he would like to add safe routes to school in terms of a strategy and develop the goal of becoming a "Platinum Bike City" by 2020.

Richard Eber – noted that he would like to continue to get a wider audience for the Specific Plan and get the Historical Society involved for their perspective. He noted that we need to be more inclusive with continuing to try to get more involvement.

Bob Hoag suggested that the youth fares need to be extended up with BART and questioned whether there is currently a fee reduction and to what age that extends?

Adam Foster – stated that while the community workshops have had great attendance and the Committee has been good with getting the word out to increase attendance, he suggested that one of the reasons people attend is due to the convenient location downtown and suggested that he would like to get the next meetings downtown, if at all possible, so that there is a consistent meeting place.

Tim Grayson noted that he agreed with the central meeting place, but noted that it was incumbent upon the Committee members to get the word out. He noted that the temptation is always there to get too far into the details, but he reminded the group to stay at a higher altitude and policy minded so that the City is ready for whatever scenario comes forward in the future. He noted lets come prepared with our materials so that we are proactive in developing policies, not as reactive. He suggested for staff to provide some specific timelines for roll out of plan and be specific in terms of the actual targets we are shooting for. He emphasized the City needs policies to be included for whatever future occurs. He recommended the City consider some targets and outcomes/options if those targets are exceeded or alternately if those targets are not met, similar to an if/then statement. Lastly, he noted, the team needs to continue to engage BART.

On the Horizon.....

Chair Ron Leone noted that the City Manager and he will be meeting on the Downtown Vision with the General Manager of BART within the next few weeks. He also noted that he is working on a public realm-themed project, potentially with CCWD, and

hopes to update the group at the next Committee meeting. He noted this could be some type of public art or public fountain that would say you have arrived, but will likely require fundraising.

Larry Gray offered that perhaps you could sell bricks to help fundraise for that type of effort.

Ms. Johnson noted that BART has some funds toward Station improvements and the City has applied to a safe routes to transit grant which could leverage funds to broaden the scope of our Master Bicycle Plan to the entire City. The City should know by December if they made the short list.

Kathy Renfrow noted that when the Chair meets with the BART General Manager, they should be reminded about the prior meetings on Downtown BART and a lot of the previous discussion that has already occurred.

FUTURE MEETINGS

Staff requested that 3-4 additional meetings be added to the Downtown Steering Committee's schedule during the first half of 2014, one of which will be planned to be a Community Workshop. The Committee agreed that the Salvio Pacheco location is preferred, for a future workshop if possible.

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REGULAR MEETING OF THE DOWNTOWN STEERING COMMITTEE FOR THE SPECIFIC PLAN

JANUARY 13, 2014

II. PUBLIC COMMENT PERIOD

Ray Barbour commented regarding the planned arches at Todos Santos Plaza and noted that he felt that the arch is a piece of art and not a sign. He stated that he felt putting Concord on it took away from the branding of the area, and thought the arches were an important opportunity to use branding and indicate you have arrived to the North Todos Santos District. Mr. Barbour provided a graphic of the arches and indicated that he thinks branding can tastefully occur through the arches letting people still know they have arrived at the City of Concord, but within the Todos Santos District.

PUBLIC COMMENTS CLOSED

III. CONSENT ITEMS

A motion was then made by Tim McGalilian and seconded by Ross Wells to approve the meeting minutes from the previous meeting. The meeting minutes dated October 15, 2013 were then unanimously approved.

IV. DOWNTOWN STEERING COMMITTEE CONSIDERATION ITEMS

Downtown Specific Plan progress on document/ schedule

Chair Ron Leone discussed he had told Rich Eber he would allow him some time to speak regarding some concerns he wanted to discuss and then noted he would allow Richard Eber to initiate a discussion for the Committee to respond to.

Richard Eber noted that there have been some concerns of a few of the Committee members. He noted they have been unhappy with the work that Perkins + Will is doing and that although the City is paying them it seems their allegiance is elsewhere. He also stated that Committee members have not had enough time to provide enough of their vision. He stated that he believes the Committee has been on a very short leash with not enough opportunity to participate. He also noted that staff in polling for comments of the Committee regarding implementation strategies in November and using a 1, 2, 3 rating system he felt had simplified the process and did not provide adequate opportunity for feedback.

Mr. Eber noted that Kirk Shelby, Virginia Thomas, Kathy Renfrow and he had a meeting with staff to share their concerns throughout the process and staff subsequently prepared a handout (FAQs) summarizing the questions from the Committee members. He noted that staff did a very good job in recapping the points and providing a summary of the meeting. He noted his concerns are that in order to make it diverse and take care of priorities of ABAG and the State of California, we may be losing what we love about Todos Santos Plaza and making it too dense and losing too many parking spaces. He noted that he is concerned regarding ABAG and their mandates with more density and intensity of development downtown. He questioned whether we wanted to create a downtown that he feels may be difficult for existing residents to access. He stated that he had a meeting with Ron Leone on this subject and Chair Leone urged Mr. Eber to provide positive things the Committee could move forward with, in an effort to achieve consensus. Mr. Eber noted that he is interested in making Concord a better place to live. He offered that the downtown has positive things

and he wants the Commission to reach consensus. He reiterated that he would like for the City to maintain independence from ABAG.

Chair Leone questioned whether the Committee could perhaps review each of the points/concerns on Mr. Eber's list. Mr. Leone suggested opening the floor to the Committee to discuss the various points and in particular the first item regarding maintaining independence as a Committee from ABAG or from the State.

Virginia Thomas noted that there were certain deadlines associated with the grant funding, and felt perhaps that this didn't let the Committee be as independent. She noted there seemed like a back side push to get things done within a timeframe without necessarily having time to think things through.

Adam Foster noted that he respectfully disagreed with Richard and believes the consultants had performed a professional job and that he had learned a lot from them.

Ed Andrews noted he agreed with Adam to the extent that P+W can provide some expertise. He noted, although we want more housing, and some of the economic development that comes with that and we need a certain level of expertise to do so. But he agreed that we don't want to be run by someone's agenda that is not for the betterment of Concord.

Ross Wells stated that the consultants are professionals and have been doing an excellent job. But noted that we do want to maintain independence. He indicated what he was hearing is that the process may be moving forward to quickly.

Kirk Shelby noted that in the Plan that we are seeing we do not necessarily see how are comments have been incorporated and he noted that the Committee has not necessarily come to agreement on everything. He noted that strong opinions were expressed regarding Clayton Rd. and Concord Blvd. and that bike lanes should not be included on those roads because it is not healthy. He noted that he has frustration to a certain extent was regarding the bike lane issue and that although they were protected bike lanes that is not enough for safety on these roads, along with the health and safety aspects. He noted that the plan feels pre-ordained to a certain extent.

Tim McGallian agreed that we do have certain time constraints with a grant and that we probably would not have been able to do the project without the grant, but he noted he has also noticed that the comments provided to the consultants do not come back in the following meeting and he noted that was also for the Committee to address in

Ms. Johnson noted that the PDA grant does have certain strings attached in that certain parameters need to be addressed within the Specific Plan. But she noted that in terms of the density, these are all issues that were already addressed back with the General Plan adoption when the current densities of the designations downtown were determined. She stated we are not making any changes to zoning with this Plan. She noted those are all policy decisions that were determined back in 2007. She noted the bike lanes were a result of Ray Kuzbari submitting a grant to OBAG and receiving that grant for the two streets and thus Perkins + Will has simply been reflecting bike lanes per the approved grant for projects that will be implemented soon. She indicated that is an area where we can't really step back. She noted that there has not been a lot of strong consensus on some of these other issues.

She noted that this is where Joan and I were looking for the Committee's assistance in terms of the review of the Draft Plan and noted that we only got a handful of comments from the Committee. She noted that we only got a handful of comments on the implementation strategies and only one set of comments on the entire document, and noted that was the opportunity of the Committee to provide specific comments on the Plan, and she noted that unless you do that we cannot forward that information to the consultant.

Mr. Eber noted that it was difficult to respond regarding the implementation strategies.

Ms. Thomas noted that she was not sure how to reply regarding the implementation strategies that she did not like and thus did not respond on those.

Adam Foster noted that he came up with his own notation system to provide his comments to staff and provided more detailed comments on some. He noted that finding consensus among 13 committee members on many issues was going to be difficult. Dealing with a large specific plan area, is almost like a general plan, he noted that many of the strategies do indicate that this is a component we will have to study further.

Kirk Shelby noted that he thinks the Committee would be surprised by how many things they probably agree with. He indicated he would like to look for those opportunities to create some agreement. He noted his frustration was with this Committee potentially missing the mark and not getting the circulation right, especially with the bike issue and missing certain opportunities.

Kathy Renfrow noted that she was surprised that not more people read the Plan, because most of the plan was pretty good. She stated she was not sure how to have a conversation regarding the Plan if nobody commented on it.

Mr. Leone noted one of the things he thought was useful was having the additional meetings and noted that additional meetings had already been added and that was the reason that you did not see the consultant at all of the meetings. He then suggested that one of the things we need to do is draw consensus and that does not mean that everyone has to agree then we can give direction to P+W so they can put it in the plan. He noted he thought we were all in agreement that Concord wants its own plan. But that we need to be more specific so that they have clarity.

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Ms. Johnson noted that she could start making a list for discussion, noting that the first one would be regarding the bike lanes, and went up to the white board.

Ross Wells questioned whether this was a mute discussion item regarding the bike lanes since they have already been granted the funding. He questioned would we send the money back?

Kathy Renfrow noted that there are other people who would use those bike lanes.

Adam Foster noted that he rides a lot and would feel uncomfortable on bike lanes there and has ridden on Clayton Road, but where he feels safer on the sidewalk.

Ms. Johnson noted that we should be getting the Safe Routes to Transit grant which would be \$200,000 in addition to what we have toward a Bicycle Master Plan and if we think that the bike lanes associated with the OBAG grant would not be a good idea, you may want to consider studying that further.

Mr. Leone noted that one of the things he was thinking is having some general consensus saying for example, we don't want to have traffic hindered on Clayton Road. Even if certain items are going under study, the Council will know there is consensus on those items.

Ms. Johnson suggested you could also come up with a performance standard.

Mr. Foster noted it would be difficult to become to prescriptive. But agreed there may be certain items to study further.

Kirk Shelby noted the key item was in staying safe. He noted he has seen lots of collisions with bikes and cars on Galindo and Clayton Rd.

Richard Eber noted that he has had the need to take Cowell Road over to Monument Blvd. and that this area has experienced more traffic. He cautioned unintended consequences and noted that bikes are never going to represent more than 1% of the total. He noted that bikes do not accommodate riding in the rain or riding with packages. He noted we should not put so much emphasis on such a small segment of reality.

Mr. Foster noted that a multimodal approach could alleviate some of your concerns about congestions and traffic. When you have large discrepancies in speed this can be a huge safety matter, as well as turning movements. He noted, nobody wants to cause an accident when they are driving.

Mr. Eber noted for #2 that he does not want development to reach such a level that residents are not able to achieve good access to reach downtown.

Ms. Johnson noted that this goes back to what is already allowed in the downtown and that up to 100 du/acre is allowed with up to 70 feet in height around the Plaza and 200 feet in most of the remainder of the downtown. This is what would be allowed if we did not do anything. If we did not want that to happen we would need to change the General Plan and the Development Code.

Mr. Eber indicated he just doesn't want to see what happened near the Pleasant Hill BART Station where people cannot access the area with lack of parking and general congestions. He noted he wants to keep Todos Santos Plaza the great place it is.

Tim McCallian noted that *Mr. Eber* continues to refer to this area, and that this is what we have a Planning Commission and Design Review Board for. He agrees that we need to be aware of the downsides, but we have already agreed on the mix of housing and retail and office. We can discuss the low income and affordable side of it.

Mr. Leone noted that the reality is that the downtown concord area has a sufficient amount of affordable housing already. What we are really looking for is market rate housing with people with disposable income that will help to support our businesses and our restaurants and he noted this is something we have already discussed.

Darrin Walters agreed that we were moving forward with market rate housing to generate disposable which was mentioned a number of times by the Committee members.

Ms. Johnson noted yes, this was the case and that we also discussed retaining existing affordable housing within the project area to ensure we are meeting our fair share, but that currently the need is for more market rate housing.

Ms. Ryan noted that we also spoke of setting milestones so that we can check in and quantify the amount of affordable housing over time such that we do not lose the existing affordability that we do have, and that slowly over time as market rate units are added, adjustments may need to be made, but that currently there is adequate affordable housing downtown.

Ms. Johnson indicated if there were specific phrases or modifications to implementation strategies, we could address those.

Adam Foster stated that Mr. Eber had indicated that the increased density may detract from the downtown, noted that we had a transportation professional look at the parking issue and they indicated that there was adequate parking even for special events.

Mr. Eber noted he didn't want to jeopardize the access to the downtown.

Mr. Foster noted he believes that he would welcome additional people downtown and feels the streets would be safer with more people on them. He challenged Mr. Eber and noted that the outside agency influence affecting the process seemed to be the tea-party platform that Mr. Eber was bringing in and that he had used their language verbatim with the "stack and pack housing" and noted that he felt he was trying to bring in outside influences more than anyone on the Committee.

Mr. Eber noted that he disagreed.

Mr. Leone noted that what he heard Mr. Eber saying is that he did not want new projects to be built without enough parking such that overflow parking occurs out into neighborhoods and streets.

Mr. Eber stated that is exactly what he meant. He indicated this is what was indicated in comment #5.

Mr. Walters noted that he works in the downtown and there are people waiting for stalls in the parking structure as he leaves and he believes that there is not adequate parking now especially for special events.

Mr. Foster noted that overall by providing free parking it is first come, first serve. He noted that Walnut Creek now has meters in many of the parking garages. He noted the reality is that the City is subsidizing free parking. Those funds can be put back into the downtown. If we are going to make parking free, you are not thoroughly analyzing the issue.

Mr. Walters noted that there are other ways to get to the downtown, but people are not necessarily aware of them, and indicated he had three people that day ask him where the BART station was. He noted if we developed the Grant St. corridor people would know that they didn't have to drive. He stated that the City does not fully utilize the downtown BART station and that if we did more people would utilize it for the events; and we are very fortunate in that our City has two.

Mr. Shelby agreed but for those who cannot use BART, it is realistic to expect that they would take their car. He noted, if we are looking way out into the future there may be other alternatives that may become available that families could utilize. He stated yet our whole infrastructure has been set up on the private vehicle. He indicated you need a check and balance and this debate has gone on since the 1980s in linking traffic up to the freeways. He stated at this time there is a dearth of opportunities where you almost have to twist someone's arm to come here. But at some point it will turn around. He noted this is where consultants can be helpful based on their experiences in other cities.

Mr. McGallian queried if we are talking about additional people living downtown, there was ample parking provided at past projects such as the Renaissance. If we are planning properly, these people should not be creating a parking problem.

Ms. Johnson noted that the Plan also calls for a Parking Management Plan because most of those lots are sitting empty many of the times and they are not allowing people to park in their lots during the events.

Mr. McGallian noted that with the Swift Parking garages, those are being leased out during the day.

Mr. Foster noted that there will be some substantial demographic shifts with younger people being attracted to urban areas, similarly empty nesters will be doing the same. He invited the Committee to the craft beer festival on Jan. 25 and noted many of them will be coming via BART to a live, festive event.

Florence Weiss stated that you will see waves of people coming from BART from San Francisco, Berkeley and Oakland to the Brew's Fest for its third year and this is evidence also of how we get new businesses as we now have two new businesses about to open with brew pubs downtown. She stated that she too lives in Concord and that the demographic is not necessarily what you would think on a Saturday night downtown. She noted there are parking issues on the weekend. She indicated that Bank of America does now open their lots on Thursday nights for the special events and charges for it, and that lot gets used more and more.

Mr. Wells noted that sitting on Design Review and we always want to make sure that there is adequate parking. He noted that more of the issue is people from other areas of the City needing parking and that may call for the use of trolleys or something similar, but most of those will be using their car.

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Mr. Eber noted that issue #8, that the Grant St. corridor would assist with this and promote people to use BART, to walk, to bike and that there are other cultural attractions which can be done, beside just concerts downtown.

Kathy Renfrow noted that when looking forward 30 years, much of the attraction to in the future could will likely be out to the Naval Weapons Station and so many of the people that we think may be downtown, may actually be out a the new weapons station.

Ms. Thomas stated that is why she would like to see the downtown grow stronger now.

Mr. Leone questioned whether there was yet agreement on this issue of parking and the Committee agreed that there was.

Mr. Andrews indicated that he does not have a problem with higher density and questioned Mr. Eber as to how that will impact access to downtown.

Mr. Eber noted he that is not against, nor for anything in particular, but does not want to make Concord into a mini-San Francisco and wants to preserve our current way of life.

Amos Munoz noted that what I just heard Mr. Eber say is that I don't want to disrupt my current lifestyle, but this plan will change that because what I am hearing is this will change the residential, this will change the retail and increase jobs and so there will be a different high level picture and if you disagree with that picture then we are never going to meet.

Kirk Shelby noted that the downtown plaza is pretty much at capacity during special events. In the development part of it, besides just housing, you need to provide for other activity areas, beside Todos Santos Plaza.

Adam Foster indicated that Mr. Munoz brought up a great point, he noted that a small time feel is an appealing thing to many and noted that high speed traffic does not promote a small town feel.

Kathy Renfrow noted that in the plan it was noted that along Grant St. there would be businesses and activities and that most of the focus would be along Grant St.

Kirk Shelby responded that it was a delicate synthesis that has to happen.

Mr. Leone stated that he thought it would become a synergy as more people started living downtown, with other people who have visions of businesses and activities that could happen to have your capacity enhanced. He noted that in his opinion this vision of the plan enhances Concord, it doesn't destroy Concord.

Mr. Eber noted that we did not have to go into #6 at this time, as CSBA has invited DeSaulnier to speak on SB 1.

The Committee then agreed they could go onto item #7.

Mr. Eber indicated #7 was one area where it seemed there have not been as many opinions as he would like to see, especially with cultural opportunities.

Ms. Johnson responded that staff had asked for participation in preparing the vision statement and that little had been forthcoming and so staff brought forward some examples from other cities with successful downtowns, and thus staff drafted a vision statement based on the comments that we heard from the Committee and you had an opportunity to comment and we incorporated those comments and everyone expressed satisfaction with the vision and so she indicated she was puzzled by the comment.

Mr. Eber noted that Mayor Grayson had indicated a small convention center, libraries, other people museums and a small performing arts center, artist's lofts, it seems that we have not explored this enough.

Mr. McGallian stated that the infrastructure put forth in this plan does not prohibit any of that, but he noted you also have to have someone who steps forward who wants to build it. He noted at no point did we ever say you can't put it in. He noted, we can't just park a piece of land and say that will be a convention center in 20 years. There are really only so many options, we have not prevented any of them, we are encouraging certain uses, we can only go so far.

Kirk Shelby noted that on Grant St. we would like to encourage certain uses in certain areas with more retail for example along Grant St. and any developer should be made aware of that from the beginning and the Design Review Board and Commission will be there to review that as well to make sure it is consistent with the plan.

Kathy Renfrow stated that this is why she keeps asking what the economic development plan for the area is and the outreach to different businesses and what is the plan to bring those additional businesses here.

- Mr. McGallian noted, but that is a different department, that is John Montagh and he has an economic development plan that he is following to do that on a daily basis.
- Ms. Renfrow responded that she believes that is an important part of the plan.
- Ms. Andrews stated there is not a lot of retail that works in this town and that soft goods does not work at all. He noted that in order to have the synergy of retail, you need to have a good 150,000 sq. ft. of retail in an area where people can feel like they are walking. He noted that it is not the strongest market that people think. He recommended revisiting the PBID to brand and promote the downtown as a shopping area for something besides just eating and restaurants.
- Mr. Leone noted that he agreed. He mentioned that Ray Barbour had mentioned this before of re-branding the downtown as the Todos Santos District.
- Mr. Foster indicated Broadway Plaza was a great example of downtown pedestrian retail. He noted that small blocks were more helpful. He questioned whether the high speed corridors were helpful in encouraging those downtown pedestrian tenants and stated that he thought an organic mix of businesses and the use of Todos Santos District as a brand with Todos Santos Plaza as the anchor was appealing and believes it can grow from there.
- Mr. Leone noted #10, that the desire for Early California Architecture had been discussed and agreed to.
- Mr. Foster noted that he would like the Galindo House tied into the house more and that he liked what Carol had suggested with the Adobe Drive and that exploring that area as more of a retail center was interesting.
- Mr. Eber noted that he was disappointed that the historical society had not had any appreciable input to the plan because he thought they should really be included in some of the conversations.
- Ms. Ryan noted that Jay Trolin of the historical society had been made aware of the meetings and website and had provided input to the implementation strategies and that there was a specific implementation strategy crafted by him.
- Mr. Eber noted that it would be nice if the historical society representative had attended some of the meetings.
- Ms. Renfrow questioned whether Mr. Eber had invited him.
- Mr. Eber noted that he had not but would be willing to. Do you think that if we invited them to the meeting we would have time for them. Mr. Eber noted that they would have more expertise as to the historical nature of the downtown.
- Mr. Leone questioned whether the Committee had been successful in getting through Mr. Eber's entire list?
- Mr. Eber noted that yes, he believed they had and that he felt the discussion had been a very healthy one and one that needed to happen.
- Mr. Leone thanked everyone for their discussion and apologized to staff for trailing off of the agenda with other topics.
- Ms. Johnson noted that the summary the Committee had discussed actually hit on a number of the agenda items including a) the progress to date, and b) discussion of the FAQs that was prepared as a result of the meeting with the subset of the committee. Ms. Johnson also made the Committee aware of agenda item c) that the Draft Addendum would be available for review on Jan. 21st on the webpage and that the Addendum would be looking at regulatory updates since the Supplemental EIR was prepared in terms of Air Quality, Green House Gas and an updated Urban Water Management Plan prepared by Contra Costa Water District. She emphasized that because we are not changing anything, in terms of the land use, an EIR was not required. She noted that because there was not any rezoning, most of the environmental analysis had already been prepared previously through the General Plan EIR and Supplemental EIR for the Development Code and that the Addendum was simply providing these regulatory updates.
- Ms. Ryan confirmed that the Open House would be held on Jan. 27th and encouraged the Committee to attend.
- Ms. Johnson noted that this would be a different format than previous workshops with more of an Open House format with different stations set up for land use, environmental, circulation and implementation.
- Ms. Ryan noted that there would be copies of the Specific Plan as well as the Draft Addendum available for review at the different stations and that these would both be available on the website.

DOWNTOWN CONCORD SPECIFIC PLAN

Ms. Johnson also reminded the Committee that they could still take comments regarding the plan and that if there were parts of the plan that they continued to have concerns about or that were unclear, there was still an opportunity to do word-smithing.

Ms. Ryan confirmed that the Open House was at 6:30 p.m. and the location was at the Salvio Pacheco Building, Suite 201.

Ms. Renfrow inquired as to whether there would still be visual renderings to assist in understanding the plan.

Ms. Ryan indicated the renderings would be available at the Open House which would include both an aerial looking north over BART as well as a view down Grant St. with a before and after in terms of what the future could look like.

Mr. Foster noted that staff had done a great job at the previous workshops and that he had been very proud to be a Committee member involved with those workshops and he thanked Jeff for allowing the use of the meeting space. He offered one suggestion noting that perhaps it could be noted here are some changes based on your input.

Mr. Shelby offered what about outreach to residents in Clayton Valley and outside the area.

Ms. Ryan noted that staff could utilize the City's facebook page to get additional information out and noted that a press release could be used.

Ms. Johnson noted that the City Talk

Ms. Ryan then provided a brief update regarding the Housing Element Update and noted two

roundtables had been held in November and a third update would be provided in January. She noted that the Regional Housing Needs Allocation for the next cycle for Concord was approximately 3,500, and that this was Citywide, not just downtown. She noted that the important thing was to understand that the City was not required to build these units, but did need to provide land adequately zoned to provide the capacity for those units to be built and a regulatory environment with policies to encourage development. But noted that the Downtown Specific Plan would inform the Housing Element Update.

Mr. Eber asked whether a portion of this was geared toward the naval weapons station?

Ms. Johnson replied that ABAG had assumed that 10% of the Naval Weapons Station would develop during Cycle 5 and that this could be a bit optimistic given that the City is just now in the next month going out for a Request for Qualifications from developers which would be followed by a Request for Proposals for a master developer. She noted there was enough existing capacity within the City without having to rely on the weapons station to put housing on during that timeframe.

Ms. Ryan noted she had provided a previous Housing Element presentation with their materials and that it was important to note that during the last two years there had only been 0-2 new units built as compared to 385 back in 2000-01. She indicated the noteworthy item was the finding regarding the increasingly younger population.

Mr. Leone noted that he sees impending growth happening in the near future for Concord and that is because apartments in San Francisco are now approaching \$3,000-\$5,000/month and it is more expensive than in New York, so people will start moving out of the City. He noted, we will be able to attract some of those people. He also noted the TBID as another opportunity as they are beginning to market as a destination location in addition to the dealerships.

Ms. Johnson noted that during the roundtables, one thing that was mentioned as a challenge according to developers was the schools, but this may be also be an opportunity for residents in the community or on the Committee to get more involved.

Mr. Leone noted that the meeting was finished and that the Committee had done a great job today.

DOWNTOWN CONCORD SPECIFIC PLAN

REGULAR MEETING OF THE DOWNTOWN STEERING COMMITTEE FOR THE SPECIFIC PLAN

MARCH 31, 2014

I. ROLL CALL

Ten members were present and one at-large alternate was also in attendance.

II. PUBLIC COMMENT PERIOD

No Comments.

PUBLIC COMMENTS CLOSED

III. CONSENT ITEMS

A motion was then made by Darrin Walters and seconded by Jeff Woods to approve the meeting minutes from the previous meeting. The meeting minutes dated January 31, 2014 were then unanimously approved.

IV. DOWNTOWN STEERING COMMITTEE CONSIDERATION ITEMS

Recent Meetings - Update

Joan Ryan, Senior Planner provided updates to the Committee regarding the Open House held on January 27th, the City Council update provided on February 4th, and the status of the Long Range Property Management Plan, the Housing Element Update, a PDA grant that would be submitted for Salvo Street improvements adjacent to Ravio's restaurant, and the upcoming ATP grant that staff will be reviewing for potential projects.

Agency Coordination - Update

Ms. Ryan and Carol Johnson, Planning Manager provided updates to the Committee regarding recent meetings with BART and shared preliminary concept plans prepared by BART designed to provide station improvements at the Concord BART Station, including preliminary banner concepts. *Ms. Ryan* also indicated that BART would be conducting a deep cleaning of the station in the next 3-4 months.

Tim McGallian stated that any way-finding within the BART improvements should be consistent with the 13 way-finding kiosks already located in the downtown.

Darrin Walters inquired when the Committee could provide input to the BART plans.

Ms. Johnson responded that part of the BART process would be to hold a community outreach meeting to get the public's feedback in terms of preferences and that BART is still putting together cost estimates for each of the design components in the plan. She noted it may be similar to the process the City went through with "Penny for your Thoughts" in that there may not be enough funds for all of the improvements, so the community may need to prioritize what they see as the primary needs.

Ms. Ryan then shared that she and Chair Leone had attended the Airport Land Use Commission meeting on March 26th to provide a presentation regarding the Downtown Specific Plan project. She noted that the Commission was unanimous in determining that the Downtown Specific Plan was consistent with the Airport Land Use Compatibility Plan.

Robert Hoag stated that he sees the Buchanan Airport as a stealth asset to protect to attract businesses and that the airport could be an attractive asset when future businesses are considering whether to locate in Concord, for example at Bank of America tech center (now Swift Plaza), but especially as the Naval Weapons Station develops. He noted that it will be important to stay in contact with the ALLUC as the downtown and the weapons station develops in the future.

Chair Leone agreed and noted that there is not currently a Concord representative on the Airport Land Use Commission and that he would like Concord to have a future representative.

Kirk Shelby questioned in returning back to discussing the BART plans, why the taxis and busses were located as they are and noted this poses potential conflicts. He noted that he would expand the walkway for pedestrians and even consider closing Oak Street (at Grant) near BART to coordinate a bike street to Laguna. He noted that it would be unfortunate to construct all this work but be too short sighted. He explained his vision of expanding the walkway north where pedestrians could safely walk up Grant St. or even through the Bank of America (Swift Plaza) campus.

Adam Foster stated that he believed the BART plans may be too conservative and provide the bare minimum, if we are looking at a longer life span for the area. He also suggested that Oak Street could be closed and become an attractive bike route.

Ms. Ryan then indicated that Downtown Concord had been selected for review and analysis by an Urban Land Institute Technical Advisory Panel. She noted that the dates would be April 24-25th.

Ms. Johnson indicated that the Panel would participate in a tour of the downtown, sit in with interviews of stakeholders likely selected from property owner and business leaders and then conduct an intensive work session and charette designed to answer what would assist Concord in jump starting development in the downtown. She indicated staff would be providing the panel binders of information on the downtown including the Draft Specific Plan.

Ms. Ryan noted that the findings of the panel would be provided on the afternoon of April 25th and that the presentation would be open to the public.

Ms. Johnson noted that the Committee would be receiving an invitation.

Comments received on the Specific Plan and Draft Addendum

Ms. Ryan shared the general comments received on the Specific Plan and the Draft Addendum during the public comment period. Three comments were received on the Specific Plan including those from TransForm, property owner Frank Dodd and Greenbelt Alliance. She noted that two comment letters were received on the Draft Addendum including those from Greenbelt Alliance and Adam Foster.

Ms. Ryan then summarized each set of comments through a power point presentation. She noted TransForm comments primarily addressed parking issues and indicated staff was providing updates in the Final document to accommodate a number of the comments or to study further based on existing implementation strategies.

Ms. Ryan then summarized the comments of Frank Dodd which were primarily regarding the City's existing Secondary Living Unit ordinance.

Robert Hoag noted regarding the water meter connection/service that a separate meter should not be needed as most of the water use is associated with outside watering.

Tim McGallian stated that the intention is not to see two lots or two homes on these lots and that this could become problematic later if the City should want to increase density in the area later.

Darrin Walters noted that with a separate meter it is easier to split the bill and track water use of renters and thus landowners would prefer separation, but the cost is high.

Adam Foster respectfully disagreed with Mr. McGallian and noted that more flexible secondary living unit language would allow the land owner an income stream in which to make continued improvements at the property. He noted that the City of Danville has many attractive secondary living units and that this is a great way to institute affordable housing by design because the units are small but affordable and provide an option to multifamily housing.

Ms. Johnson reminded the Committee that the reason they had not moved forward with intensifying the area south of BART was due in part not only to the neighborhood outcry at the neighborhood meeting held, but also due to the costly sewer upgrades that would likely be needed for densification of the degree associated with any multi-family housing.

Ms. Ryan noted that secondary living units are currently allowed on any single family property as long as the setbacks and coverage requirements are met. The commenter is requesting additional flexibility with respect to the deed restriction that currently requires the owner to live in one of the two units.

Mr. Foster noted that the current water connection/service fee was excessive.

Ms. Ryan then summarized the comments of Greenbelt Alliance (Community Coalition for a Sustainable Concord which included requesting a delay in the process to allow for the outcome of the ULI panel, more specific language for safer walking/biking, parking demand management and affordable housing. She noted the comments also requested an affordable housing unit target, the dedication of two of four vacant city sites for affordable housing, creation of good jobs that pay living wages, and green jobs and ensuring connections to regional open space.

Kirk Shelby questioned didn't we discuss affordable housing months ago and conclude that we were focusing on market rate housing not affordable housing initially at least to attract residents that would support local businesses? He noted the earlier findings were that the Downtown already has a lot of affordable housing.

Darrin Walters agreed and noted that we already meet the affordable housing goals in the downtown.

Tim Grayson agreed and noted that the only way to make Downtown work is that the City needs more market rate housing. He noted that the consultant had already provided information earlier in the process that the downtown has more than enough affordable housing, along the lines of 60% and therefore the City already exceeds the target. He stated the City needs to be attracting market rate housing in order to provide the support needed and the disposable income needed to allow local businesses to succeed and to attract new businesses. He noted that Greenbelt Alliance has good intentions, but that the affordable housing numbers are currently high, and that the City will focus on market rate housing and then continue

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to monitor affordability in the area. He noted adjustments can be made over time. He stated the City needs to create the economic movement and pursue the common goal of jobs.

Kirk Shelby noted that the idea is to create a vibrant mix of housing types. Committee needs to take care in terms of how the issue is addressed in terms of genuineness, but that this was also his understanding that we would be moving forward initially at any rate with a focus on attracting market rate developers.

Joel Devalcourt representing Greenbelt Alliance and the CCSC clarified that the letter on the Specific Plan was not just from Greenbelt Alliance but from the Community Coalition for a Sustainable Concord (CCSC) which includes the CNWS Neighborhood Alliance, East Bay Housing Organizations, IBEW Local #302, Carpenters Local Union 152, Public Advocates, Save Mount Diablo and TransForm. He noted that an earlier draft plan included 850 affordable units downtown (referring to Sept. 9, 2013 power point presentation - page 10) and wondered what happened to that earlier concept. He indicated that he believes we can come to a middle ground, with respect to affordability.

Monitoring/Dashboard and Tracking Mechanisms for Implementation

Ms. Ryan then summarized the concept of regular reporting of the progress of the specific plan, similar to how staff currently must report annually on the progress of the General Plan. She indicated that performance monitoring and reporting would be used to determine how progress is being made toward the implementation strategies included within the Specific Plan. She noted this could include observing trends as well as identifying problems with achieving objectives or strategies. She indicated that staff's preference would be to

develop a web-based accessible dashboard for tracking implementation progress and provided some examples.

She then noted some examples of the types of quantifiable components that could be tracked including the number and types of units (built, entitled, and in the application queue), existing and new affordable units, activity trends with commercial and office sectors, pedestrian and bike improvements, parking availability, etc., and then invited discussion by the Committee in terms of what they would like to see tracked over time.

Mayor Grayson indicated that one of the components he wants to track more regularly is traffic counts and volumes along with bikes and pedestrians.

Robert Hoag stated he would like tracking of the number of businesses that come to the downtown and those that leave to understand why they are choosing Concord and also why they are leaving, so we can track the kinds of businesses and sector trends. He noted that business licensing may already have some of this. He noted, then we can determine how we may want to market differently.

Adam Foster noted that he would like to include accident data as well as information regarding the increase in pedestrians and bike riders over time, with a time table so we can track growth over time.

Larry Gray noted the importance of being able to see how the plan is progressing and indicated he would like a timetable for implementation.

Amos Munoz stated the break-down of retail is important as well as the diversity in terms of the types of retail; he noted that currently the retail environment is boring.

Ed Andrews echoed the concern and noted that currently the only interested parties he gets are those interested in opening restaurants. Soft goods are not attracted to the downtown. But he noted that gross sales tracking in the downtown would be helpful but can be tricky as many tenants are cautious about this, due to the fact that many leases are tied to gross sales, so they are protective of info, but demand and customer count would be valuable.

Ms. Johnson noted that there are technical solutions out there that can assist the City in providing a dashboard that makes the progress of the downtown more transparent to the public. She noted that she recently spoke with a few such businesses at the recent Planning Commissioner's academy.

Kirk Shelby stated that he agreed with Mayor Grayson and Adam Foster in the need for the tracking of accidents and the volume of bikes and vehicles. He also noted that there are emerging solutions. He also indicated that vacancy rates can be deceptive and that you need to know the reason behind certain vacancies. He also noted that tracking of average rental rates and sales prices would be valuable.

Adam Foster noted that there are sensors available to provide data regarding bike and pedestrian foot traffic, they are used in San Francisco.

Larry Gray questioned once the Specific Plan is adopted they what are the next steps.

Staff responded that action on the implementation strategies would begin, but that many of them require additional funding and therefore staff may be relying on grant funding for many of the strategies.

Larry Gray questioned whether the City would move forward with some of the improvements prior to any development necessarily occurring.

Chair Leone indicated yes that to the degree the City can, they will be moving forward with improvements as this is what attracts new businesses.

Adam Foster emphasized that he believes focus should be on moving Willow Pass Road toward a pedestrian focus that allows cars, but makes pedestrians a priority. He noted that the City needs to put more of a focus toward multi-modal priorities in order to attract the young professionals and the growing younger segment of the population that wants more urban living otherwise he noted, they will go elsewhere.

He noted that the Concord Naval Weapons Station will add additional traffic to Willow Pass Road and so now is the time to make those adjustments.

Chair Leone noted that the original concept and city layout was not pedestrian oriented, but designed more for vehicular traffic.

Darrin Walters noted that just the re-timing of lights could assist with reducing the amount of traffic on Willow Pass Road if the flow of traffic on Clayton Road and Concord Blvd. improved.

Kirk Shelby responded that by routing or re-routing the traffic flow, the routes need to be capable of handling the traffic.

Amos Munoz provided kudos to staff in their planning of the recent Open House on January 27th and noted that the format and the information provided was very well thought out and received.

Tim McGallian noted that it is quicker to get through on Willow Pass Road than Clayton Road and that

Clayton Road would be utilized better if the flow improved.

Chair Leone agreed and indicated that he won't use Treat Blvd. for that reason due to length of time it takes to get across town and to the freeway.

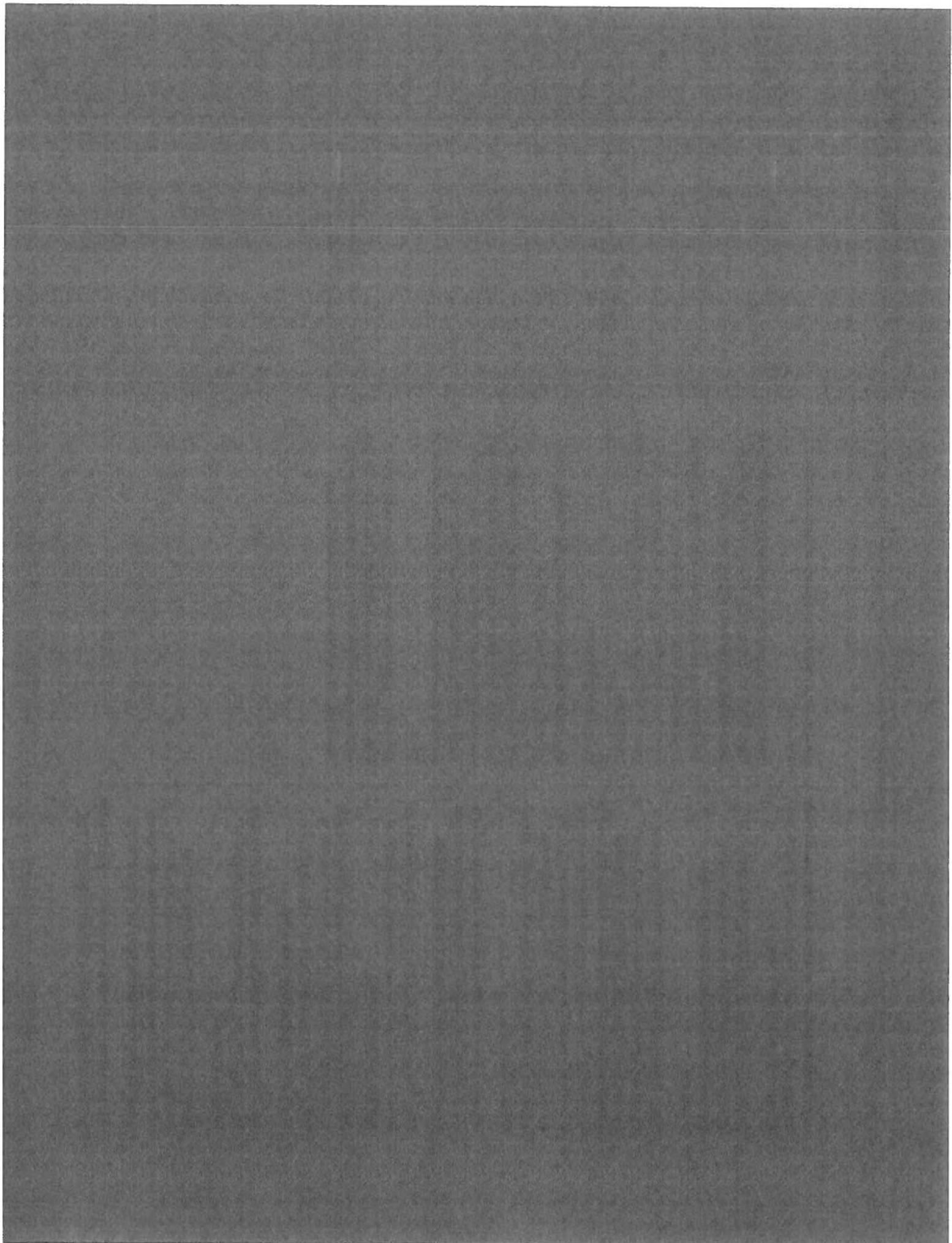
Tim McGallian noted that Park and Shop should be included more within the Plan and that Paul Sinz has a retail plan that he has been working on for the rear of Park and Shop along Salvio St. that staff should see.

FUTURE MEETINGS

Ms. Ryan indicated that future DSC meeting was currently scheduled for April 28.

Ms. Johnson polled the Committee as to whether they were interested in meeting one more time and the consensus was that they would. Ms. Johnson suggested that perhaps the Committee could discuss the findings of the ULI Technical Assistance Panel

Ms. Ryan noted that Planning Commission and City Council dates are tentatively set in May for the adoption of the Specific Plan, but that staff would see what findings came out of the ULI Panel.



09 Appendix

DOWNTOWN CONCORD SPECIFIC PLAN

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CITY OF CONCORD

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Councilmember (Chair)

Tim Grayson
Mayor

Robert Hoag
Planning Commissioner

Tim McGallian
Planning Commissioner

Kirk Shelby
Design Review Board member

Ross Wells
Design Review Board member

Darrin Walters
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Adam Foster
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Kathy Renfrow
At-large Member

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Sections 9.2, 9.3 and 9.4 are appendices and available through the following link, under the “Project Documents” heading on the right hand column of the Downtown Specific Plan webpage, found at:

<http://www.cityofconcord.org/downtownplan/>

Urban Land Institute – April 25, 2014

Panel Recommendations

Immediate/First Small Moves

Implementation Strategies	1) Define and Brand Downtown
ED-1 A, B, D T-4 A, E, F I-1B	<ul style="list-style-type: none"> - Push BART to get Station way-finding concept plan to better connect neighborhoods and Downtown districts - Integrate Art - New Downtown graphic
	2) Improve access and orientation for auto drivers, pedestrians, and bicyclists
I-2 E, F, G T-1 G	<ul style="list-style-type: none"> - Re-examine signal timing on through streets, especially during mid-day - Fill in deficient/missing sidewalks - Provide pedestrian access to Park and Shop off Salvio Street - Demonstration bike lanes and connections as economic development – Concord Blvd.
	3) Form Parking Downtown Improvement District managed by Downtown associations
ED-1 E T-3 F ED-2 C T-4 C	<ul style="list-style-type: none"> - Leverage ample existing parking spaces - Offer shuttles with 15 minute headways; linked destinations between BART Station, Todos Santos Plaza, John Muir Medical Center, and Diablo Valley College - Ombudsman for homeless population
	4) Increase activity and destinations in downtown
T-1 B ED-5 B ED-1 G	<ul style="list-style-type: none"> - Curate pop-up retail program with short-term leases near Swift Plaza at Grant St. - Retail kiosk - Target new unique restaurants – i.e., Hop Grenade, Pig and Pickle - Add more programming in park
LRPMP	5) Locate Justice Center to existing vacant buildings near Police station (don't wait for new structure on redevelopment parcel)
	Development Priorities
Short Term Strategies	
LU-3 D ED-4 A ED-6 D T-1 B, C, G I-1 A I-2 G	Pedestrian priorities <ul style="list-style-type: none"> • Focus on activating Grant through coffee carts, outdoor seating, kiosk retail • Allow pedestrians to walk down Grant without having to push button to cross street • Accommodate pedestrian crossings in all signal phases in Specific Plan areas, at least during daytime.
I-2 A, B, C, E I-2 F, K T-1 E T-4 G	Bicycle Priorities <u>Bike lanes</u> <ul style="list-style-type: none"> • Concord Blvd from Oakland to Detroit • Clayton Rd and Sunset from Detroit to Concord Blvd • Detroit Ave from Concord to Contra Costa Canal Trail Spur • Salvio Street from Port Chicago Highway Path to Olivera Rd and Reuse Project • Grant Street from BART station to Willow Pass Rd <u>Bike Paths:</u> <ul style="list-style-type: none"> • Port Chicago from Salvio to Sunset • Contra Costa Canal Trail to Detroit Ave • BART right of way from Systron to BART Station to Port Chicago Highway path <u>Neighborhood Greenways</u> <ul style="list-style-type: none"> • Oak and Laguna between Detroit and BART station • Salvio Street from Port Chicago to Fry's

T-1 F T-2 A, B	<p>Roadway Priorities</p> <ul style="list-style-type: none"> • Re-time signals for quicker cycle and better progression • Convert Grant and Mt. Diablo to two-way between Concord and Salvio St. • Adopt NACTO Urban Street Design Guide for use on all streets • Eliminate LOS thresholds for downtown environmental analysis • <i>Extend Salvio to Fry – Long term strategy</i>
T-3 B ED-1 E, I ED-2 C, G F-1 D	<p>Parking Priorities</p> <ul style="list-style-type: none"> • Allow off-site parking arrangements to meet any commercial parking requirements administratively. • Delegate authority to Downtown Todos Santos Business Association management of parking. • Lease surplus parking from private owners and make available to public. • Valet parking for Thursday evening peak. • <i>Install parking way-finding and real-time availability information. – Long term strategy</i>
T-4 E, F I-1 A, B I-2 F, G	<p>Station Priorities</p> <ul style="list-style-type: none"> • Partner with BART to get Concord Station prioritized in upcoming round of major station improvements • Prioritize pedestrian arrival at Grant St.
T-1 A F-1 A, F	<p>Transit Priorities</p> <ul style="list-style-type: none"> • Partner with Diablo Valley College, John Muir Medical Center, Todos Santos Business Association and County Connection to rebrand and improve frequency on Line 20. Run every 15 minutes all day to match BART schedule. (Free, Every 10-15 minutes, Branded to Concord/Operated by County Connection). • Consider rerouting Line 314 between John Muir Medical Center, Concord BART and Pleasant Hill BART via Monument Blvd. and improve headway to match BART schedule.

TRANSFORM



EXHIBIT B

MEMO

TO: Joan Ryan, Senior Planner; Ray Kuzbari, Transportation Manager; Carol Johnson, Community Development Director

FROM: Ann Cheng, Program Director, and Jean Long, GreenTRIP Planner at Transform

DATE: January 28, 2014

RE: Recommendations for City of Concord's parking and transportation related land use policies for the Downtown Concord Specific Plan Final Draft – January 2014

Thank you and the City for your hard work on the Downtown Concord Specific Plan! We appreciate the time to discuss the following recommendations for the Downtown Specific Plan with you. We are very pleased to see that Concord's existing parking policies and proposed Specific Plan policies are headed in the right direction.

As you know, the City's Development Code, updated November 2013, already includes excellent parking policies that we support such as shared parking and parking maximums that prevent wasted spaces in transit-rich locations. This memo includes a list of recommendations for traffic reduction strategies in the context of parking and traffic policies in the proposed Specific Plan and building off the existing Development Code.

The current code acknowledges the importance of a transportation demand management (TDM) program to diminish parking demand. We suggest additional key TDM strategies, which are unbundled parking, free transit passes, and carshare memberships, to help reduce parking requirements and car ownership in new housing development.

We encourage the City to deepen the additive parking reductions from affordable housing, transit-oriented development, and TDM within the Specific Plan and future iterations of the Development Code. Some recommendations are paired with examples of similar policies found in other Bay Area cities. With some minor adjustments, the Specific Plan could be even more effective at helping the City of Concord achieve the goal of a healthy, thriving, convenient, safe, and walkable community in its Downtown!

Transit-Oriented Development Overlay District Map

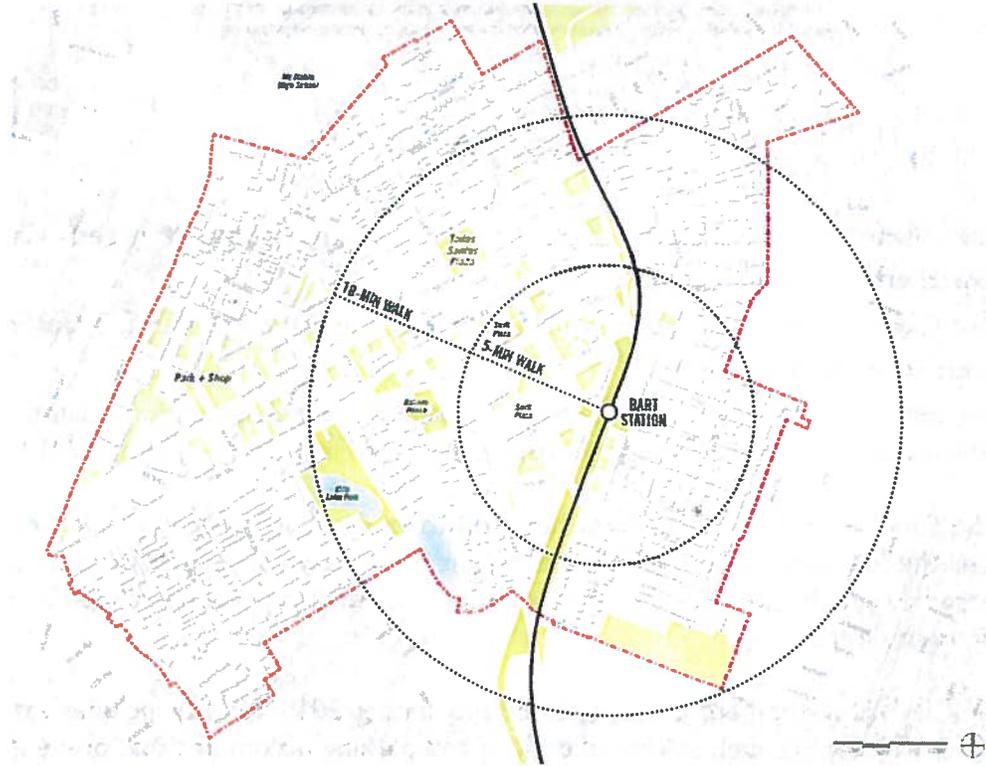


Figure 2.1 Walking radius from BART station

Existing Parking Facilities Map



Fig. 5.17 Existing parking facilities

Proposed Parking Regulations and Policies in Specific Plan

The Specific Plan includes several innovative strategies to support improved transportation choices that reduce traffic congestion while also making it easier to find parking. In general, we support these policies and encourage the City to adopt them with some adjustments. It appears the Specific Plan is integrating newly adopted development code policies. We hope there is an opportunity to explore going further to strengthen these policies to ensure growth can happen without gridlock.

We applaud the City's newly adopted parking policies in the development code. The existing code recognizes the need for less parking in locations within a half-mile of BART stations and other transit hubs. Additionally, parking standards for affordable housing found on **Table 122-581.6** in the Development Code are even lower than the requirements for the transit overlay district. Additive parking reductions for proximity to transit and mixed use centers and housing affordability directly reflect multiple studies of actual parking utilization in similar areas with affordable housing.

Please consider amending the following proposed policies in the Specific Plan to include the following recommendations:

I. C-6.3: Modify parking requirements developments within the Specific Plan Area (as shown in Table 5-2).

Recommendation I-A: Add existing parking policies of the Development Code into **Table 5-2** in the Specific Plan (pg. 123) to show what the City has already adopted. Add a column for 50% less parking maximum for projects providing the most effective package of traffic reduction strategies suggested in Recommendation I-B.

Summarizing recently adopted policies in one table will help remind everyone involved in the planning process of existing parking policies to build upon. It would also help to include a note on Table 5.2 stating that these requirements are both minimums and maximums, as defined in the code.

Table 1: City of Concord. (2014). Table 5.2 of Downtown Concord Specific Plan Final Draft – January 2014. Pg. 123.

Table 5.2 Parking Requirements				(Recommended additions to Table 5.2)			
Land Use	Unit	Transit Overlay District ¹	Non-Transit Overlay District ²	Existing Requirements		Proposed Additions	
				Affordable Housing	Affordable Housing within TOD Overlay	TDM Strategies:	
	Studio	0.75	1.0				
Multi-Family	1-Bedroom	1.25	1.5	0.67	0.5	50% reduction with implementation of all three strategies: 1) Unbundled parking 2) Free transit passes 3) Free carsharing memberships and spaces for shared cars	
	2-Bedroom	1.5	2.0	1	0.75		
	3-Bedroom	2.0	2.5	1.5	1		
Hotel	Per Room	0.75	1.0	1.75	1.25		
Retail	Per 1,000 sq ft	3.0	4.0				
Office	Per 1,000 sq ft.	2.48	3.33				
Medical Office	Per 1,000 sq ft	5.0	5.0				
(1) From Division 3, Section 122-386 for commercial development (2) From Division 3, Table 122-385.1				From Development Code - Table 122-581.6: Modified Parking Standards for Qualifying Affordable Housing and Mixed Income Developments			
(3) Parking requirements are both minimums and maximums. From Division 3, Section 122-385 for excessive parking.							

Reduced Parking Requirements through TDM Strategies

We are pleased to see a recommendation for the City to consider pairing further parking reductions with transportation demand strategies such as unbundled parking, transit passes, and carshare memberships in the Specific Plan (pg. 145). The current Development Code is a great starting point (see excerpt below), allowing a 25% maximum reduction for TDMs.

Figure 1: City of Concord. (2013). Development Code - Division 3, Section 122-386, Adjustments to Parking Requirements. pg. 49.

- (g) **Other adjustments.** For other uses that can demonstrate that due to special circumstances, such as the nature of the use, proximity to transit, transportation characteristics of the use, or implementation of a transportation demand management program, there will be a reduced demand for parking at the site, the number of parking spaces required by Table 122-386.1 may be reduced by up to 25 percent. Reductions may be allowed subject to a Use Permit, as follows:
- (1) The parking demand study, as directed by the City, substantiates the need for less parking (e.g., documentation of customer frequency, information on parking standards required for the proposed use by other cities, etc.) than required in Table 122-386.1.
 - (2) The applicant has demonstrated that the project could provide additional parking if long-term parking demand requires additional parking; and
 - (3) Parking demand generated by the project will not exceed the capacity of or have a detrimental impact on the on-street parking in the surrounding area.

Recommendation I-B: We encourage the City to consider an automatic parking reduction of 50% for any projects providing all three of the following strategies within the entire Downtown Plan Area:

- 1) free local bus transit passes (one per unit or employee)
- 2) 100% unbundling
- 3) free carsharing memberships and a space for a carsharing pod on site.

With this suite of these strategies, proven to be the most effective for traffic and vehicle ownership reduction, the City can encourage development of homes that are both more affordable and provide affordable transportation.

Free Transit Passes: The provision of free transit passes to residents and employees will incentivize transit use, especially in Downtown Concord. AC Transit and VTA have operated bulk transit pass purchase programs for the last 6-15 years. Their EasyPass and EcoPass programs provide significant discounts for passes purchased in bulk. For example, AC Transit charges \$120 for an annual transit pass when a minimum of 100 passes are purchased. TransForm's GreenTRIP Certification has shown that there are 10 developers so far are willing provide up to two free transit passes per household for 40 years. To date, there are also over 50 housing developments and more than 85 employers that are providing free passes as a result of these programs. Fortunately, Contra Costa County Connection is gearing up for the adoption of an EcoPass program this spring. Free transit passes, at least one pass per unit or per employee, can be required in new residential and businesses developments in the Plan Area.

City of Berkeley's [PTDM Zoning changes for the downtown](#) – adopted in 2012. The City of Berkeley recently adopted Zoning changes to require free transit passes for the downtown.

“H. For new structures or additions over 20,000 square feet, the property owner shall provide at least one of the following transportation benefits at no cost to every employee, residential unit, and/or G.L.A. resident. A notice describing these transportation benefits shall be posted in a location or locations visible to employees and residents.

1. A pass for unlimited local bus transit service; or

2. A functionally equivalent transit benefit in an amount at least equal to the price of a non-discounted unlimited monthly local bus pass. Any benefit proposed as a functionally equivalent transportation benefit shall be approved by the Zoning Officer in consultation with the Transportation Division Manager.”

2. C-6.4: Evaluate flexible parking standards to provide flexibility to developers as minimum parking requirements reduce feasibility of infill developments on small lots. Include requirements for unbundled parking from the purchase/rental price of residential units.

Recommendation 2: We are thrilled to see the emphasis on flexible parking standards in the Specific Plan that allow developments to build “right-size” parking instead of constructing excessive parking only to meet requirements. We recommend an amendment to the Code, however, to also highlight flexibility as requirements are currently written as parking minimums and maximums intended to curb excessive parking. Ideally projects could start with less parking than originally approved with using landscape reserves or garage ceiling heights that could accommodate installation of parking lifts or stackers if parking demand exceeds initial supply.

We are also happy to see that unbundled parking will be required for new residential development (as noted in the Specific Plan) as we could not find mention of unbundling in the Development Code. Unbundled parking should also be required for non-residential development.

3. C-6.5: Encourage carsharing through partnership with carsharing entities.

Recommendation 3: To go a step further in defining what a partnership with carsharing companies could look like, the City should consider requiring provision of both carsharing parking spaces and free memberships in new developments for developments over a minimum size. Carsharing companies like ZipCar, City Car Share or GetAround, are expanding their service areas and are particularly interested in locating where cities are incentivizing carsharing instead of excess parking.

Currently, there is one ZipCar pod at One Concord Center across from Concord BART station with two vehicles. Given planned growth in Downtown and near BART station, more pods will be needed.

We are happy to make introductions to City staff to the carsharing companies above so that all parties can jointly plan for service expansion in Downtown Concord and near both BART stations.

Carsharing memberships can cost as little as \$50 a year. TransForm’s GreenTRIP certification has encouraged a few developers to provide 40 years of free carsharing membership (at least 2 per household) for projects with a carshare pod on site or within a ¼ mile of the site.

City of Berkeley's [PTDM Zoning changes for the downtown](#) were adopted in 2012. The City of Berkeley recent Zoning changes also included required carsharing space provision for new downtown developments.

"1. For residential structures constructed or converted from a non-residential use that require vehicle parking under Section 23E.68.080.B, required parking spaces shall be designated as vehicle sharing spaces in the amounts specified in the following table. If no parking spaces are provided pursuant to Sections 23E.68.080.D or 23E.28.090.C, no vehicle sharing spaces shall be required.

<i>Number of Parking Spaces Required Minimum</i>	<i>Number of Vehicle Sharing Spaces</i>
<i>0 – 10</i>	<i>0</i>
<i>11 – 30</i>	<i>1</i>
<i>30 – 60</i>	<i>2</i>
<i>61 or more</i>	<i>3, plus one for every additional 60 spaces</i>

- 1. The required vehicle sharing spaces shall be offered to vehicle sharing service providers at no cost.*
 - 2. The vehicle sharing spaces required by this Section shall remain available to a vehicle sharing service provider as long as providers request the spaces.*
- If no vehicle sharing service provider requests a space, the space may be leased for use by other vehicles. When a vehicle sharing service provider requests such space, the property owner shall make the space available within 90 days."*

4. GOAL C-6: A parking supply that supports Downtown businesses and stimulates economic growth, while not promoting excessive driving.

Recommendation 4: We are pleased to see included in the Implementation plan strategy T-3 E and T-3 F. To further support this goal we recommend including an explicit goal of ensuring 15% availability of street parking on any given block to ensure parking is not impacted as new development fills in the Downtown and BART Station areas. This is equivalent to about 1 out of 7 spaces on an average block face and is a parking management industry standard.

Downtown Walnut Creek has an established parking enterprise zone that is currently implementing demand based pricing to ensure parking availability while allocating a portion of the revenues to support downtown business activities and to improve transportation choices for safer and more complete streets including expanding free downtown shuttle service, widening sidewalks and increased pedestrian and bicycling safety measures. We would be happy to introduce staff to Matt Huffaker, Assistant City Manager in charge of this program in Walnut Creek to Concord staff for further discussion.

5. Policy C-4.3: Increase bicycle parking in the public realm.

Figure 2: City of Concord. (2013). Development Code - Division 3, Section 122-393, Bicycle Parking. Pg.61.

122-393 Bicycle Parking

Bicycle parking shall be provided for all multi-family projects and non-residential uses in compliance with this section.

(a) Requirements for short-term bicycle parking

(1) Required number of spaces. Short-term bicycle parking spaces shall be provided equal to five percent of the required vehicle spaces, with a minimum of two spaces per site.

Recommendation 5: The Specific Plan includes a policy for more bicycle parking in public areas, but does not mention if it is on- or off-street bike parking in new development. Currently, the Development Code policies link bicycle parking in multi-family and nonresidential developments to vehicle parking requirements (as shown in the excerpt above).

We recommend decoupling bicycle parking from vehicle parking. Bicycle parking should be tied instead to square feet of use proposed so the amount for required bicycle parking is determined independent of car parking spaces. This ensures that bicycle parking is not reduced as reductions for car parking are applied. Additionally, the different requirements for both long-term and short-term bicycle parking for residents and guest parking located on street, should also be included in the Specific Plan.

The City of Oakland’s bicycle parking ordinance is a very thorough code example, distinguishing between short and long term parking requirements as well as ideal bike parking dimensions and design guidelines.

<http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak025007.pdf>

Another example is the Garden Village project in Downtown Berkeley, which has been designed for car-free living. The building will provide permanent bicycle storage hooks within each unit for two bicycles, yielding 162 secured bicycle parking spaces. In addition, the development will also have 24 bicycle lockers will be installed at grade level, 34 basement spaces, and 8 on-street bicycle racks will be installed near the building entrance for short-term visitor parking. The project demonstrates the diversity in the types of bicycle parking that can be made available in new developments aiming to reduce vehicle parking.

<http://www.discovergardenvillage.com/student-life/>

II. Appendix: U.S. Census Transportation Data Comparison: Concord Citywide vs. Downtown

Table 1: Vehicle Ownership – Comparison between Concord City and Downtown Concord Specific Plan Area

Concord Citywide			Downtown Concord Specific Plan Area (Census Tract 3280, 3350, 3361.02)			Concord TOD 1/2 mile radius of the BART Station (CNT, TOD Database.org)		
Total Households	Households with Zero Vehicles		Total Households	Households with Zero Vehicles		Total Occupied Housing Units	Households with Zero to 1 Vehicle	
44,634	2,613	6%	5120	933	18%	2,417	1,481	61%

U.S. Census Bureau. (2012). American Factfinder. Retrieved from <http://factfinder2.census.gov/>
 Center for Transit-Oriented Development (with CNT). (2012). TOD Database. Retrieved from <http://toddata.cnt.org/>

Below is a comparison of vehicle ownership and means of transportation to work from Census data to provide additional demographic context between the City of Concord as a whole and the Plan Area. We drew data from Census Tracts that covered the majority of the Plan Area but did not include data from census tracts that only covered a small portion of the Plan Area. This analysis is a general profile of the Plan Area. Detailed data for transportation is not available by block group.



*From LEHD On the Map: Downtown Concord Specific Plan Area highlighted in fuschia. Census Tracts outlined in green. Block groups labeled numerically. Selection of Census Tracts **3280, 3350, 3361.02** used for estimates of Specific Plan Area.*

Planning Area Boundaries cover Census Tracts:
 3280 (Block Groups 1 and 2);
 3290 (approximately southern quadrant of Block Group 4);
 3310 (approximately western third of Block Group 3);
 3350 (Block Group 3);
 3361.02 (Block Groups 2, 3, 4 and northern quadrant of Block Group 1); and
 3552 (southern quadrant of Block Group 4)

Recent Census estimates suggest that households with zero car ownership in the DCSP Plan Area (18%, 933 households) is proportionally higher than the City of Concord as a whole (6%, 2,142 households). In fact, **61%** of households within a half mile of a Concord TOD own either zero or 1 vehicle.

The Plan Area also has a higher proportion of commuters (**38%**) who carpool, take public transit, walk, or use other non-vehicular modes compared to the citywide percentage (26%). 18% of households in the Plan Area do not have vehicles, but there is room for improvement to boost numbers of commuters who get to work without driving alone. These findings indicate that vehicle ownership is less common in the high frequency transit served areas and residents who have access to transportation options are less likely to drive to work. With fewer car trips expected from a TOD, amending parking requirements will help reduce traffic congestion and save scarce real estate from being turned into lots that could otherwise be dedicated to other economic uses.

Table 2: Means of Transportation to Work – Comparison between Concord City and Downtown Concord Specific Plan Area
U.S. Census Bureau. (2012). American Factfinder. Retrieved from <http://factfinder2.census.gov/>

Concord Citywide			Downtown Concord Specific Plan Area				
			Census Tract 3280	Census Tract 3350	Census Tract 3361.02	Total	Percent
Vehicle - drove alone	41,188	70%	457	1,192	2,198	3,847	60%
Carpool	7,233	12%	162	253	517	932	15%
Public Transportation	6,552	11%	206	173	477	856	13%
Walk	650	1%	71	16	214	301	5%
Taxi, bike, other means	1,403	2%	-	42	257	299	5%
Worked from home	2,205	4%	18	55	88	161	3%
Total	59,231	100%	914	1,731	3,751	6,396	100%

Sources:

Center for Transit-Oriented Development (with CNT). (2012). TOD Database. Retrieved from <http://toddata.cnt.org/>

U.S. Census Bureau. (2014). Longitudinal Employer-Household Dynamics (LEHD) – On the Map. Retrieved from <http://onthemap.ces.census.gov/>

U.S. Census Bureau. (2012). American Factfinder. Retrieved from <http://factfinder2.census.gov/>

B08201 HOUSEHOLD SIZE BY VEHICLES AVAILABLE, 2012 ACS 1-year Estimates (Concord city)

B08201 HOUSEHOLD SIZE BY VEHICLES AVAILABLE, 2008-2012 ACS 5-year Estimates (Census Tracts 3280, 3350, and 3361.02, Contra Costa County)

B08141 MEANS OF TRANSPORTATION TO WORK BY VEHICLES AVAILABLE, 2007-2011 ACS 5-year Estimates (Census Tracts 3280, 3350, and 3361.02, Contra Costa County)

Ryan, Joan

From: F. J. Dodd <fjdodd@comcast.net>
Sent: Thursday, February 27, 2014 5:12 PM
To: Ryan, Joan
Subject: Downtown Concord Specific Plan
Attachments: city proposal points.doc; cottage furnished.pdf

Joan,

Thanks for taking the time to discuss the Downtown Concord Specific Plan with me.

Per our discussion, I believe there is a need for a gentle increase in housing density in the neighborhood east of the BART station within the area covered by the proposed specific plan. A significant quantity of low to medium cost housing could be organically added to this neighborhood while maintaining the look and feel of a neighborhood of bungalows and cottages.

Usually increasing the housing density means replacing the existing single family residences with multistory medium housing with an abrupt transition at the interface of the old and the new. The proposed alternative is to encourage property owners to add second units within the Transit Station Overlay District. This could be done through minor changes to Article III, Division 2, and Article V, Division 1 of the Development Code. The types of improvements in the proposed Downtown Specific Plan could be realized without city expenditures beyond providing standards, guidance, and encouragement. The neighborhood would be improved. Property values and associated tax revenues would increase.

I have attached more of the specific details that we discussed as a list of "bullet points", and a sample plan for a typical RS6 property in the neighborhood.

I look forward to further discussion.

Regards,
Frank Dodd

This email is free from viruses and malware because avast! Antivirus protection is active.
<http://www.avast.com>

SUGGESTIONS FOR ENCOURAGING IMPROVEMENTS TO THE NEIGHBORHOOD EAST OF BART AND WITHIN THE DOWNTOWN CONCORD SPECIFIC PLAN

OBJECTIVES:

- Increase housing density adding mid to low cost housing units close to transit.
- Maintain and enhance the look and feel of a neighborhood of bungalows and cottages.
- Broaden the range of housing types and prices.
- Make the neighborhood more walkable
- Increase street side tree planting.

CITY ACTIONS:

1. Remove barriers to development
 - a. TS overlay revision to allow secondary units within Downtown Specific Plan (DSP) area up to 1000 sq. ft., 2br unit in RS6 if unit footprint remains 640 sq. ft..
 - b. TS overlay revision to eliminate owner occupancy requirement for secondary unit.
 - c. Meter fees – Reduce water meter fee, or eliminate separate meter requirement for secondary unit.
 - d. Provide flexible parking standards and/or reduce parking requirements (could be incorporated in TS overlay).
 - e. Allow PUD for two units on RS6 lot in TS overlay
2. Encourage property owners to upgrade
 - a. Fee reductions.
 - b. Provide standardized “pre-approved” planning packages.
 - c. Permit expediting.
 - d. Explore use of “in-lieu” fees for financing street side improvements, replacing sewer laterals, etc. (leverage property owner’s investment).
 - e. Grant blanket variances to original houses whose set backs do not comply with current standards.
 - f. Take enforcement action against sheds and auxiliary buildings that have been converted to living units without permits.

COALITION FOR A SUSTAINABLE CONCORD



EXHIBIT D



Michael Chavez Center
for Economic Opportunity



March 25, 2014

Joan Ryan
Senior Planner, City of Concord
1950 Parkside Dr. MS/53
Concord, CA 94519
(925) 671-3370

Re: Draft Downtown Concord Specific Plan

Dear Ms. Ryan,

On behalf of the Community Coalition for a Sustainable Concord (CCSC), Monument Community Partnership/Michael Chavez Center, and Bike East Bay we appreciate the opportunity to comment on the **Draft Downtown Concord Specific Plan (Draft Plan)**. The CCSC includes the following organizations: CNWS Neighborhood Alliance, East Bay Housing Organizations, Greenbelt Alliance, IBEW Local #302, Carpenters Local Union 152, Public Advocates, Save Mount Diablo, and TransForm.

As you know, our organizations and members have been active in Concord for many years, working in concert with residents and city leaders to help create a thriving sustainable, equitable city. Our work at the Concord Naval Weapons Station demonstrates the power of collaboration to overcome conflict and create award-winning plans that benefit all residents of the community.

We applaud the City of Concord for embarking on a Downtown Specific Plan. This planning process offers Concord a great opportunity to build a community near BART that will offer new choices for current residents and bring new residents to an exciting and historic downtown, with a mix of new homes, safe and walkable streets, exciting retail and cultural institutions, and good jobs. As the city struggles to compete regionally for investment, we recognize the need for a robust and visionary plan for the downtown that will unlock the city's tremendous potential. As currently drafted, the plan falls short of this goal. We therefore provide the following recommendations:

General Comments

Recommendation: Delay the adoption of the Final Draft Plan for at least one month to accommodate public comments, technical expertise, and careful policy and design review.

The City of Concord has an unprecedented opportunity to create a downtown plan that will change the course of its lagging development market. Currently, the Draft Plan contains many enhancements to Concord's General Plan that will bring more residents downtown, create safer and more accessible streets

for pedestrians and bicyclists, and create opportunities for mixed-use development. However, the Draft Plan provides little explanation or analysis of the proposed policies and implementation strategies released in 2013.

Although the anticipated adoption of the Plan is now set for May 2014, the City of Concord should use the next few months to create an adequate level of specificity and detail in its Draft Plan. There are several opportunities on the horizon to help achieve this outcome. The city's Housing Element update process will generate important policies for the downtown. This spring, the Urban Land Institute's (ULI) *Technical Assistance Panel* and the Cities for Cycling Roadshow will bring some of the Bay Area's best economists, developers, planners, and architects to Concord to build on the work completed to date and dig deeper into how the Plan can create a thriving downtown. The ULI panel, in particular, is an exceptional opportunity for the city to extract valuable insights from respected leaders in the midst of rapid regional change in the Bay Area. Therefore we strongly recommend that plan adoption be delayed to allow sufficient time for the staff and consultants to refine and improve the draft document.

Vibrant, Walkable Neighborhoods

Recommendation: Remove mention of three development alternatives in the Land Use chapter and focus entirely on the adopted "housing focus."

The Downtown Steering Committee and the City Council both reviewed the housing focus alternative that was selected by staff and the consultants. This Draft Plan should focus entirely on that strategy, giving more explanation of its market dynamics and policy framework. At the very least, we recommend more clarity about the relationship of the other alternatives, both to remove any confusion in the policy-making process and to give greater policy emphasis on the selected land use strategy.

Recommendation: Include more specific language in the Circulation chapter that advances innovative solutions for safer walking and biking. Ensure the integration of the Bicycle Master Plan into the Specific Plan's implementation strategies.

We are pleased that the Draft Plan includes several policies in support of a downtown that is safe to walk and bike, with less reliance on driving and stronger connections to regional transportation. Moreover, we are pleased that work to create more complete streets in downtown is moving forward, funded by the One Bay Area Grant (OBAG) program, and that there are plans to continue to develop this vision through the upcoming Bicycle Master Plan.

However, in order to be successful, the Draft Plan needs to outline a clearer 30-year vision of a thriving, walkable and bikable downtown, with more concrete, measurable outcomes, and outline how these outcomes will be accomplished incrementally over the life of the plan. Significant long-term infrastructure improvements to the downtown area for walking, biking, and transit should be considered a central strategy for catalyzing downtown revitalization and attracting the next generation of residents and workers.

Having more options for accessing downtown amenities by walking and biking, with safe, well-lit, comfortable routes connecting to surrounding communities, should be included as a key mechanism for lowering the demand for parking in areas within and surrounding the downtown. For instance, the pedestrian bridge that links Monument Community to downtown should be reopened, so that families can access amenities and open space safely. A mode-share goal should be established to measure progress and allow for adjustments in implementation actions over time. Every street within the plan should be explicitly considered as a bike- and ped-friendly street and efforts should be made to safely accommodate

all modes throughout Concord's downtown area. In addition, the plan should include clear commitment to integrate the completed Bicycle Master Plan into the downtown plan.

We also recommend adoption of the suggestions made in TransForm's attached memo (Appendix A) on the importance of enhanced designs and policies for safe and complete streets. As shown in their memo, traffic accidents in the downtown area pose a significant threat to people who are walking or biking. Just last week, a driver on Willow Pass fatally struck a woman. These changes are not only necessary to protect Concord's residents, but also vital to attract new residents, visitors, and workers and catalyze development in the historic core of Concord. Residents and visitors alike must have safe access to the amenities of a thriving downtown.

Recommendation: Enhance the city's parking policies to realize the maximum benefits from robust transportation demand management and deepened incentives for affordable housing.

We applaud the new parking policies in the Draft Plan and encourage staff to consider making adjustments outlined in TransForm's attached parking memo (Appendix B). In particular, we hope that Concord will deepen incentives for affordable housing beyond that of other developments when reducing parking requirements. Doing so will prevent the loss of an important tool for making affordable housing feasible.

Affordable Housing Opportunities

Recommendation: Include affordable housing unit target in the Plan and specifically link to the goals of the housing focus land use strategy.

We are still encouraged that the City of Concord chose the housing focus land use strategy. This signals a strong message to the region that Concord wants more homes near transit to create an exciting downtown, stimulate Concord's economy, and alleviate pressure on the region's open spaces. Earlier iterations of housing unit projections (Appendix C) included 850 affordable units for lower income families as part of the total phase I build-out for downtown Concord over the lifetime of the Plan. This accounted for approximately 25% of the total residential units for downtown. However, the current Plan makes no mention of these 850 units in either the Land Use chapter or the "Affordable Housing Implementation Strategy." Both sections should include this target with the appropriate graphs and affirmative policies to realize the City's commitment to a downtown with homes for people of all incomes. The 25% inclusion would be consistent with the commitment for the Concord Naval Weapons Station Reuse Plan to dedicate 25% of the housing developed on the base as affordable to lower income people including families, seniors, veterans, teachers, and people who have been homeless. We believe that Concord should aim to create a vibrant downtown with similar choices.

Recommendation: Dedicate at least two of the four city-owned parcels and other opportunity sites, including BART properties, to achieve the goal of at least 25% affordable homes in the Plan Area.

In order to achieve at least 25% of housing developed within the downtown footprint to be affordable to lower income families, the City should take advantage of publicly owned land to create affordable homes that are accessible to transit and close to new businesses and quality jobs downtown, including taking all possible actions to ensure that at least two of the four former redevelopment agency parcels get set aside for affordable developments. The Plan should also include language strongly encouraging BART to include affordable housing in the development of downtown BART property to ensure inclusive, transit-

oriented communities, with a corresponding goal of 25% of new units being affordable to lower income households. Affordable homes should be primarily developed by nonprofit housing developers because of their firm commitment to creating and maintaining high-quality, permanent affordable homes with attractive neighborhood-oriented architecture, green design, and community services. As demonstrated by the Housing Element workshops, many nonprofit developers are excited about the potential to create new homes in Concord and this Draft Plan is the perfect way to set the stage for early catalytic development that can also meet the needs of Concord's residents.

Recommendation: The Land Use section of the Draft Plan should include language that will explicitly link the Housing Element update policies to this 30-year plan.

The Housing Element update for the City of Concord is taking place concurrently with the drafting of the Draft Plan. Many of the policies in the Housing Element could greatly benefit very low- to moderate-income residents of Concord as development occurs downtown. The Draft Plan should include policy options and strategies that coincide with updates to the Housing Element as a way to increase the supply of homes for low-income residents near transit – thereby reducing single occupancy vehicle trips and GHGs– and reduce the risk of displacement of current residents.

Recommendation: Ensure the implementation of a nexus study for affordable rental housing fee that is integrated into the implementation strategy of the plan and Housing Element update.

Currently, the Draft Plan encourages the implementation of a nexus study for creating an affordable housing impact fee. Considering that there are dramatic reductions in funds for affordable housing without redevelopment, a nexus study is a crucial next step to finding solutions for providing enough affordable homes for Concord's residents. We believe this study should be a requirement, both as an implementation strategy of this Draft Plan and the Housing Element update, and the nexus study should be completed at the earliest possible date to allow fees to be adjusted in the early part of the current market cycle and plan implementation.

Recommendation: Include appropriate policies to prevent displacement of low-income residents as Downtown development progresses.

As the study of current conditions revealed, the Downtown and immediately surrounding areas are currently home to a large number of low-income renters living in homes subject to market fluctuations (i.e. non-deed-restricted). As implementation of the plan increases pedestrian safety and transit connectivity, spurs residential development and business activity, and makes Downtown Concord a more attractive place to live, there is a high likelihood that real estate values will increase and rents will go up. Because the plan encourages such market enhancing policies and activities, it is critical that it also incorporate protections for low-income residents who will otherwise end up priced-out of the housing market and displaced from their community. Anecdotal evidence shows that evictions are on the rise in neighborhoods like the Monument Community and this should be rigorously pursued to ensure the right policy protections are in place, especially for vulnerable populations. The plan should solicit input from low-income community organizations on the highest priorities for community stabilization, and take steps toward adopting policies to address those needs (local rent stabilization, just cause eviction, relocation assistance, affordable housing preservation, etc.) to ensure that Downtown Concord remains an affordable and healthy place to live for people of all income levels.

Quality Jobs for Local Residents

Recommendation: The Draft Plan should encourage development that will create a mix of good jobs that pay living wages.

It is important to consider not only the local physical environment and ecosystems, but the local economic environment and its systems as well.

With prevailing wage guarantees and contractor involvement in state certified apprenticeship programs and veteran hiring programs, community and private funding for this project will be reinvested in the economic vitality of the community. Instead of infrastructure improvements being a cost-burden borne by the local taxpayers and any profits leaving Concord, wages will recirculate within the local area and stimulate the economy for years to come.

To encourage sustainable and equitable development in Concord, the Plan should employ active policy measures to support the local skilled construction workforce, which is already concentrated in Concord. In particular, the Plan should incentivize the payment of area standard wages and benefits, use of contractors participating in proven, successful state-certified apprenticeship programs, and veterans programs like Helmets to Hardhats. Local area hire will serve to keep the commute distance low, which will result in lower greenhouse gas emissions. In addition, time away from home and family will be reduced, paying dividends in child-care, quality-of-life, and family unity.

Environmentally Sustainable Development

Recommendation: Enhance the policies for green development to include measurable mechanisms to create green jobs for Concord residents.

We applaud the city for policies to “Ensure that new development/retrofits adhere to LEED building and CalGreen standards, require LEED Silver rating for all new development, and incorporate sustainable planning/development principles into Downtown Design Guidelines.”¹ We would like to see a focus on ensuring that green jobs create partnerships between local community colleges, workforce training facilities, and green businesses. There should be a direct connection between the cost savings from sustainable design and the benefits for Concord residents from job growth in a sector that pays good wages.

Access to Open Space

Recommendation: Policies for circulation, bicycle, and pedestrian enhancements should include connection with local and regional open space and trail network.

We appreciate the attention to pocket parks and other outdoor amenities in the Draft Plan. The Draft Plan should ensure strong connections and access to the region’s unique trails, parks, and open spaces, including the new regional park planned for the CNWS, the Iron Horse Trail, and the Contra Costa Canal Trail. The plan should include a clear set of open space investment priorities to set the stage for further improvements to open space throughout the city.

¹ Downtown Concord Specific Plan, p. 10

Integration with Nearby Communities

Recommendation: Discuss the opportunities and potential impacts of downtown development on the Concord Naval Weapons Station Area Plan.

Development downtown does not occur in isolation. The revitalization of downtown and the redevelopment of the Concord Naval Weapons Station (CNWS) will both create significant changes to land use and transportation patterns in Concord over the next few decades. Policies and implementation strategies should be in place to ensure synergies between the downtown plan and CNWS Area Plan and ensure that opportunities for sustainable, equitable development exist throughout Concord.

Recommendation: Work with the Monument Community to ensure that the downtown plan benefits current and future residents and reduces the community's vulnerability to displacement.

The Monument Community is adjacent to downtown and will be affected by downtown development in the short and long-term. Residents are currently suffering from a bed bug epidemic and many struggle to find healthy places to live that they can afford. New housing downtown could support these families in their search for better homes. However, rising land values could increase the likelihood of displacement. Policies should be in place to ensure that residents of the Monument Community and independent businesses benefit as a result of development downtown. We recommend working with Monument Community Partnerships/Michael Chavez Center on strategies and policies to address the needs of current and future residents of downtown's adjacent communities.

Thank you again for the opportunity to comment on the Draft Plan. We look forward to working with you all to realize a thriving, inclusive Downtown Concord Specific Plan.

Sincerely,

Community Coalition for Sustainable Concord

Joel Devalcourt
Greenbelt Alliance

Amie Fishman
East Bay Housing Organizations (EBHO)

Monument Community Partnership/Michael Chavez Center
Nati Flores

Bike East Bay
Cynthia Armour

TRANSFORM



MEMO

TO: Joel Devalcourt, Greenbelt Alliance
FROM: Clarrissa Cabansagan, TransForm
DATE: March 25, 2014
RE: Analysis of Motor Vehicle Crashes with Bicyclists and Pedestrians in Downtown Concord Specific Plan Area

This memo provides analysis of crashes and traffic volumes within the City of Concord's Downtown Specific Plan Area against existing conditions as detailed in the Draft Specific Plan and corresponding consultant memos. It offers recommendations for improving multi-modal connectivity in the plan area and presents the economic and health benefits of prioritizing pedestrian and bicycle travel in the downtown.

The document is organized as follows:

1. Specific Plan background, purpose and objectives
2. Explanation of existing conditions and constraints to multi-modal improvements in Downtown Concord:
 - a. Traffic volumes on transit streets and the potential for road diets
 - b. A geospatial analysis of bicycle and pedestrian crashes with automobiles
3. Recommendations for infrastructure that encourages safety and comfort for all travelers
4. Economic and health benefits of planning for bicycles and pedestrians
5. Summary of recommendations
6. Conclusion

I. BACKGROUND

Over the past year, the City of Concord has been undergoing a specific planning process of its downtown area, designated in our region's Sustainable Communities Strategy, or Plan Bay Area, as a priority-development area (PDA). PDAs are self-appointed by cities and towns and are "neighborhoods within walking distance of frequent transit service, offering a wide variety of housing options, and featuring amenities such as grocery stores, community centers and restaurants."¹ Eighty percent of the region's projected housing growth by 2040 is directed into PDAs.



Figure 1. Downtown Concord Project Area
Source: Downtown Concord Final Draft Specific Plan

For the City of Concord, the Downtown Specific Plan is intended to encompass the PDA that extends a little over a half-mile radius from the Downtown Concord BART station. As indicated on the map in Figure 1, this BART station is a major transit hub three blocks south of Concord's historic downtown core district, Todos Santos Plaza—the focal point of the Downtown Specific Plan. This BART station, under the auspices of Plan Bay Area's PDA framework, is the primary transit asset by which the Specific Plan seeks to facilitate economic vitality.

The Monument Community, adjacent to the plan area, has also been designated by Kaiser Permanente as a Healthy Eating Active Living (HEAL) Zone—a community working to improve health outcomes for residents by supporting healthy behaviors and reducing obesity. These Concord residents have fewer resources for transportation; tend to walk, bike, take transit, and own fewer cars. Further, the UCLA Center for Health Policy Research and the California Center for Public Health Advocacy, also found that about 42% of Concord's children were overweight or obese in 2010—this is a staggering 25% above the

¹ Joint Policy Committee, 2012, Plan Bay Area, <http://onebayarea.org/regional-2012/plan-bay-area.html>

countywide rate.² The Specific Plan, then, is an opportune process for the City to commit to changes in the built environment that improve the health outcomes of its current and future residents.

SPECIFIC PLAN TRANSPORTATION OBJECTIVES

According to the Downtown Concord Final Draft Specific Plan (Draft Plan), the City “envisions the PDA as a bustling, transit-oriented, urban space serving as both a magnet of activity for the City, as well as a more regional commuter hub for central Contra Costa County.”³ As such, the Draft Plan’s overarching transportation goal is to increase BART ridership and the efficiency of multi-modal connections. A key part of this vision is to develop a “green frame” or “green network” of pedestrian-friendly streets that extend from the BART station and bound Todos Santos Plaza, intended as a pedestrian priority zone to promote active transport in the downtown.

2. EXISTING CONDITIONS AND CONSTRAINTS

The plan area exhibits diverse and unique streetscapes: many streets characterized by a pleasant pedestrian environment featuring sidewalks, street furniture, street trees and landscaping, as well as less-than-pleasant streets that inhibit walkability and connectivity throughout the downtown. This diversity has been identified in the Draft Plan by the designation of various street typologies (Figure 2).

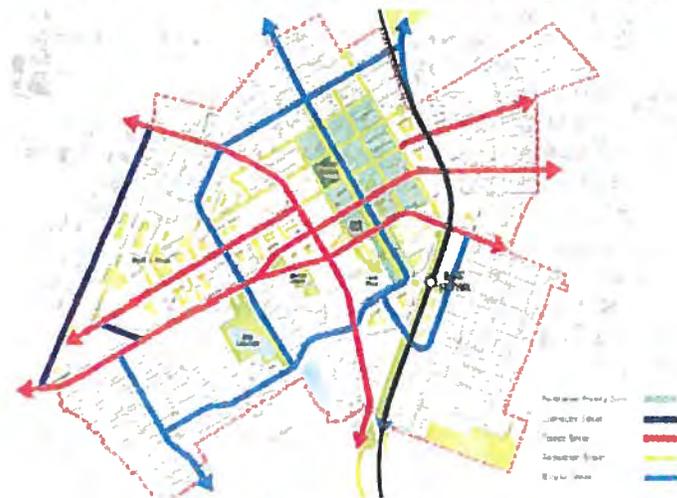


Figure 2. Street Typologies in Downtown Area
Source: Downtown Concord Final Draft Specific Plan

² Babay S. H., et al., 2012. Overweight and Obesity among Children by California Cities. UCLA Center for Health Policy Research and California Center for Public Health Advocacy. <http://chda.files.wordpress.com/2012/02/overweight-obesity-4-4-12.pdf>

³ City of Concord, 2014. Downtown Concord Final Draft Specific Plan, p.8. <http://www.ci.concord.ca.us/pdf/projects/downtownplan/draft.pdf>

While Todos Santos Plaza presents an opportunity to designate a pedestrian priority zone (teal areas in Figure 2), the existing street network poses a challenge to encourage multi-modal connectivity.

Unlike traditional downtowns, four high traffic volume streets cut through the plan area: Galindo Street, Concord Avenue, Willow Pass Road, and Clayton Road.

The plan describes these as “transit streets,” depicted in red in Figure 2. Due to their proximity to Highways 680 and 242 these streets are also truck routes that further constrain bicycle and pedestrian movements. Figure 2 quite starkly indicates these transit streets as enmeshed with streets designated as both bicycle (purple) and pedestrian (light green) oriented streets. The City of Concord must take the appropriate steps to make its downtown network of streets function to seriously prioritize active transport and encourage transit ridership over auto travel.

MOTOR VEHICLE CRASHES

According to the Centers for Disease Control and Prevention, “[m]otor vehicle traffic crashes are the leading cause of unintentional injury-related death in the United States.”⁴ Crash-related deaths alone cost Californians \$4.16 billion annually (medical costs and work-related losses)⁵—this figure does not even include the costs associated with less severe crashes.

It is important to note is that crashes are preventable. Effective policies, programs, and street design can effectively reduce the number of crashes that occur each year.

Figure 3 illustrates all non-highway motor vehicle crashes with bicycles and pedestrians in the plan area based on all available Statewide Integrated Traffic Records System (SWITRS) data for the City of Concord.⁶ There have been two fatal crashes with pedestrians and motor vehicles over the past decade. The vast majority of crashes have occurred in proximity to the BART station and extend beyond the green frame. In fact, most crashes have occurred on the four previously mentioned high volume transit streets that cut through the Downtown.

Crash trends in downtown Concord, as shown in Figure 3, highlight the need for traffic calming measures and streetscape improvements that aid in bicycle and pedestrian crash prevention. Such improvements should be in keeping with the regional PDA-framework and focus but not be limited to the 5 and 10 minute walksheds from the BART station (see Figure 4)—these walksheds also extend beyond the currently planned green frame.

- **Recommendation 1:** To develop both pedestrian priority zones and bike friendly streets, the Plan should specify that how downtown improvements to circulation will significantly seek to reduce the probability of crashes

⁴ Centers for Disease Control and Prevention (CDC), 2013. Motor Vehicle Traffic-Related Pedestrian Deaths – United States, 2001-2010. Morbidity and Mortality Weekly Report, April 19, 2013. Vol. 62, No. 15, p. 277. <http://www.cdc.gov/mmwr/pdf/wk/mm6215.pdf>

⁵ CDC, 2013, California—Costs of Death from Motor Vehicle Crashes.

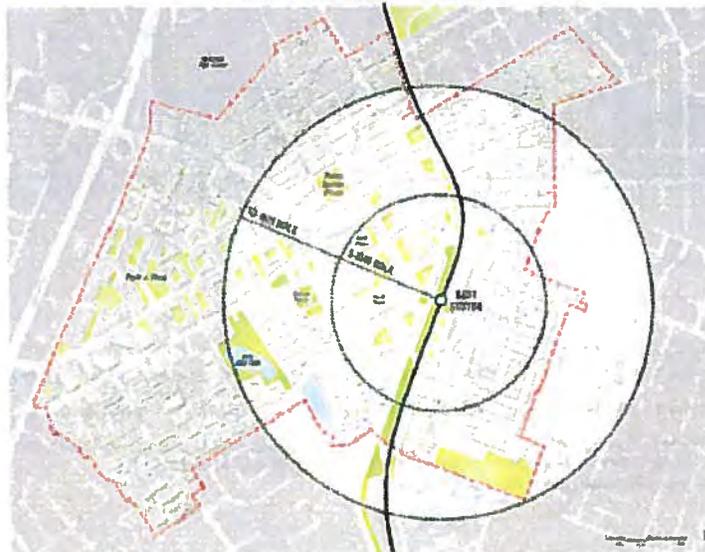
http://www.cdc.gov/motorvehicledesafety/pdf/fatal_crash_costs/ca_crashcostsdeath.pdf

⁶ Paper handouts of Figure 3 were distributed to the Downtown Concord Specific Plan Steering Committee with the above analysis described during the public comment period on July 22, 2013. Comments were summarized and included in the Final Draft Downtown Concord Specific Plan.

Figure 3. Motor Vehicle Crashes with Bicyclists and Pedestrians
 Source: SWTR, 2002-2011



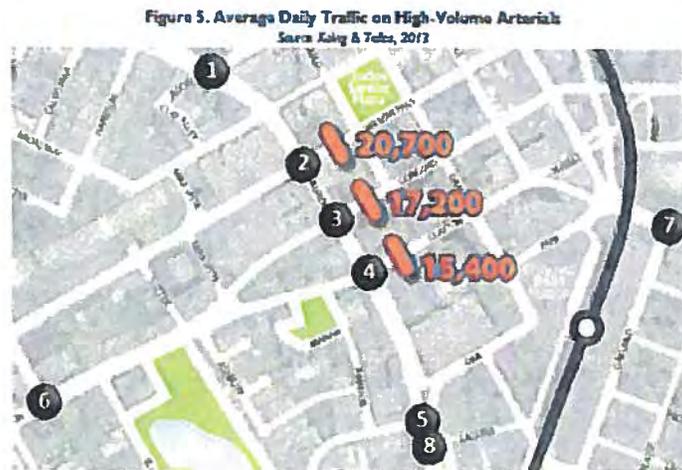
Figure 4. Walksheds from Downtown Concord BART Station
 Source: Downtown Concord Road Draft Specific Plan



AVERAGE DAILY TRAFFIC & ROAD DIETS

Road diets are a common treatment to reconfigure streets to significantly reduce crashes by slowing motorist speeds and accommodating the mobility needs of non-motorized modes of travel. They entail reducing the number of vehicle travel lanes and allocating road space to other users, such as providing bike lanes, widening sidewalks, creating a transit only lane, etc. Analysis of road diets for sites in California and Washington find results of about 19% total crash reductions. This includes all types of crashes, including vehicle crashes with other vehicles, as well as vehicle crashes with pedestrians or cyclists.⁷ This estimate is most applicable to corridors in larger suburban/urban areas (populations up to 269,000) with average daily traffic volumes ranging from 5,500 to 24,000 vehicles.⁸

The transportation consultants, Fehr & Peers, conducted a study on the existing traffic conditions as part of the Concord Downtown Specific Plan. The analysis included roadway segment traffic volume counts on three of the four high volume transit streets that flow east to west through the plan area.⁹ The consultant counts and analysis found the average daily traffic (ADT) counts as displayed in Figure 5 and detailed in Table I.



⁷ Hartley et al., 2008. Crash Reduction Factors for Traffic Engineering and ITS Improvements. National Cooperative Highway Research Program (NCHRP) Report 617.

⁸ Highway Safety Information System (HSIS), 2010. Evaluation of Lane Reduction "Road Diet" Measures on Crashes: Summary Report. FHWA-HRT-10-053.

⁹ Katig, E. and Telles, K., 2013. Downtown Concord Specific Plan – Existing Traffic Conditions. Memorandum Dated June 20, 2013 from Earl Katig and Kathrin Telles, Fehr & Peers to Dennis Dorean, Perkins + Will. Accessed on January 23, 2014 at <http://www.ci.concord.ca.us/pdf/projects/downtownsp/earl%20katig%20memo.pdf>

Table 1. Traffic Volumes on High-Volume Roadway Segments
 Source: Kaley & Tabor, 2013

Roadway	Daily			AM Peak Hour		PM Peak Hour	
	Average Traffic ¹	Level of Service	Daily Variation ²	Average Traffic ³	Variation ⁴	Average Volume ⁴	Variation ⁴
1 Clayton Rd west of Grant St	15,900	D	1.8%	420	2.3%	260	3.5%
2 Concord Blvd west of Grant St	17,200	D	1.0%	290	4.2%	500	0.5%
3 Willow Pass Rd west of Grant St	20,700	E	1.8%	370	2.7%	440	1.7%

Notes:

- 1 Average daily traffic measured over three weekdays
- 2 Standard deviation as a percent of the average of the three days of data collection
- 3 Average morning peak hour volume from the three weekdays of data collection
- 4 Average evening peak hour volume from the three weekdays of data collection

Fehr & Peers specified road diets to be ideal on four-lane roadways with upwards of 15,000 to 20,000 ADT. Using this standard, the consultants identified opportunities for road diets on Clayton Road (15,400 ADT) and Concord Boulevard (17,200 ADT), explaining there to be sufficient capacity for the removal of a travel lane (from 5 lanes to 4) to provide bike facilities and accommodate future growth. They predict current traffic levels on Willow Pass Road are not ideal for a road diet: would likely divert traffic to parallel roadways including Clayton Road and Concord Boulevard) and have limited ability to accommodate future traffic growth. The memo concludes that while all other travel modes would experience benefits from a road diet on Willow Pass Road, vehicles would likely experience degraded operations.

However, the existing literature on road diets offers evidence that the 20,000 ADT threshold does not always apply. A few public comments at previous community meetings for the Downtown Concord Specific Plan, also suggested a road diet for Willow Pass as a potential roadway treatment. And the Draft Plan currently suggests that Willow Pass Road be further evaluated for a road diet in the pedestrian priority area.

In a recently published white paper, *Road Diet Conversions: A Synthesis of Safety Research* (May 2013), Libby Thomas summarizes the literature on the safety effectiveness of road diets. Thomas concludes that there remain questions as to the ideal conditions for road diets that are conducive to the greatest safety benefits. The "road diet treatment generally seems compatible with maintaining motor vehicle capacity under the volume conditions studied, most often in moderate ranges from around 5,000 up to 24,000 vehicles per day."¹⁰ Thomas goes further to say that:

- Each potential road diet should be vetted on a case-by-case basis.
- Case study and modeling results suggest that added caution is warranted before implementing road diets on volumes in the range of 20,000 to 24,000 vehicles per day (HSIS, 2010; Knapp and Giese, 2001; Welch, 1999).

¹⁰ Thomas, Libby, 2013. *Road Diet Conversions: A Synthesis of Safety Research for the Federal Highway Administration (FHWA)*, p14. http://sarsa.bcrs.msc.edu/cms/downloads/WhitePaper_RoadDiets_FINAL.pdf

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- The acceptability of a road diet where ADT exceeds 20,000 vehicles may depend on the change in level of service more than the magnitude.

Willow Pass Road seems to be one such case requiring additional analysis. Based on the Fehr & Peers data, the highest observed variation in traffic volume along Willow Pass Road is equivalent to 21,073 vehicles.¹¹ Based on the range ADT range that merits additional caution (20,000 to 24,000 ADT), this figure is definitely on the lower end of the spectrum.

- **Recommendation 2:** The City should conduct further analysis for potential road diets in its downtown street network based on this higher threshold. Data suggests that road diets have been implemented and successful where traffic volumes approach even 24,000 ADT. Given the existing research, more traffic analysis should be conducted to determine the viability of other road diets in the plan area including, but not limited to, Willow Pass Road.
- **Recommendation 3:** The City should adopt a methodology for incremental bicycle/pedestrian-serving infrastructure improvements in the downtown tied to goals for reducing auto-trips and crashes. Concord's prescription for traffic calming and road diets should be more proactive than just examining current traffic volumes and level of service for automobile throughput. The City should specify an iterative process of determining the appropriate or additional infrastructure improvements with milestones and targets, and involve regular collection of data with the aim to meet or exceed targets. A few examples are:
 - Modal shift away from auto-travel;
 - Greenhouse gas emissions reduction targets;
 - Vehicle miles traveled reduction;
 - Crash reduction (e.g. the pedestrian priority zone could have a goal for zero crashes over a specified timeframe).

Such targets are preferably specified in the City's Climate Action Plan and Bicycle/Pedestrian Master Plan or other relevant planning processes. The City should specify that further traffic calming and road diet measures will be explored if they are not progressing towards such goals.

- **Recommendation 4:** The Plan should explicitly state that its goals and recommendations for improving bike/pedestrian connectivity do not supersede the outcomes of other, more relevant and specific processes.

¹¹ Per Table 1, daily variation on Willow Pass Road is 1.8%. Calculation: $20,700 + (0.018 * 20,700) = 21,072.6$ ADT.

MAPPING TRAFFIC VOLUME WITH CRASHES

The following set of maps overlay the frequency of vehicle crashes with bicyclists (Figure 6) and pedestrians (Figure 7) on the three streets analyzed by Fehr & Peers. Quarter and half mile radii extend from the BART station to signify where the plan should direct the most intense efforts to mitigate road safety issues. According to this frequency mapping of SWITRS data, a concentration of motor vehicle crashes with bicycles and pedestrians have occurred on Willow Pass Road and Clayton Road. Figure 8 identifies where both types of crashes with overlap, pointing to areas that should receive traffic calming infrastructure.

- **Recommendation 5:** The City should analyze collision hotspots and use the results to prioritize bicycle and pedestrian improvements in the plan area in order to ameliorate conflict points.
- **Recommendation 6:** The City should take a concerted effort in applying road diets as a traffic calming strategy to overcome barriers associated with the web of street typologies that exist in the plan area. Such improvements should follow a hotspot analysis of where conflict points can benefit from improved bicycle/pedestrian infrastructure and traffic-calming measures. Road diets remain a cost-effective solution to enhancing safety for all roadway users by optimizing existing roadways. Given the concentration of collisions on these higher volume roads, the City of Concord should take the appropriate steps to assess the viability and impact of three parallel road diets. Given the move towards a more pedestrian and bike-friendly downtown, Concord must move analysis away from vehicle throughput as the focal point for guiding transportation improvements in the downtown.

Figure 6. Vehicle Crashes with Bicyclists (2002-2011)

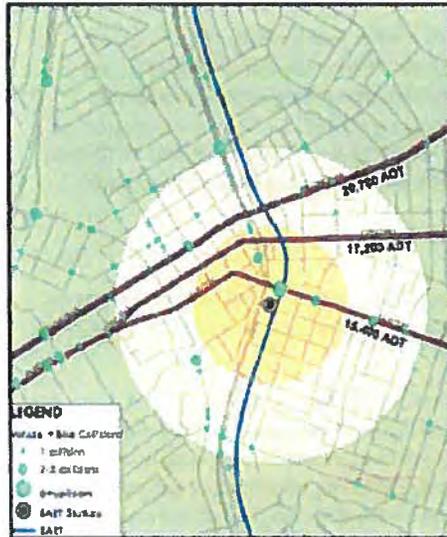


Figure 7. Vehicle Crashes with Pedestrians (2002-2011)

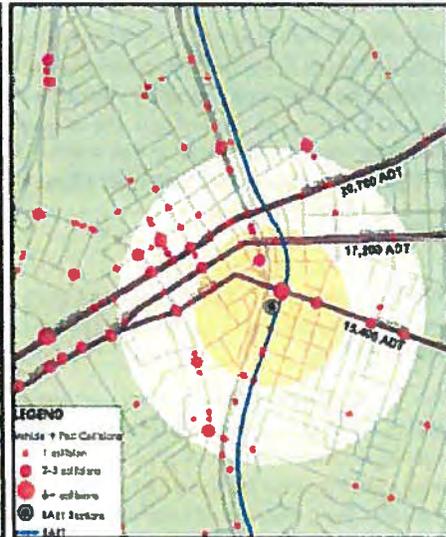
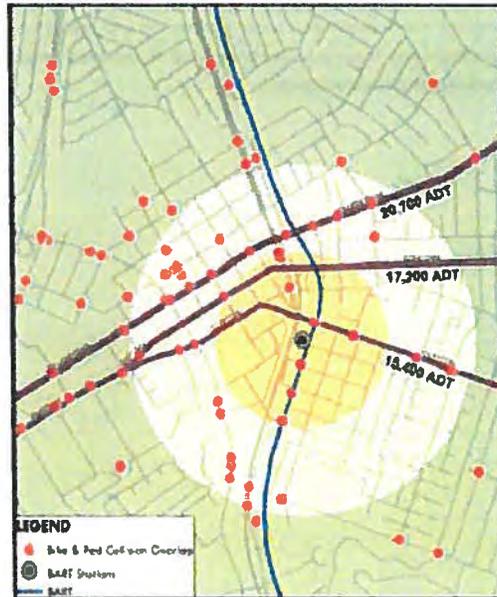


Figure 8. Overlap of Bicycle and Pedestrian Crashes with Vehicles



3. INFRASTRUCTURE TO MAXIMIZE SAFETY AND COMFORT

As a suburban location, downtown Concord streets have historically been designed to facilitate auto-movements at higher speeds and volumes. To move towards efficient, multi-modal streets, the City should consider the following recommended bicycle/pedestrian infrastructure improvements where feasible, and aim to minimize bicycle and pedestrian exposure to vehicular traffic.

Even drivers who never ride bikes overwhelmingly report greater comfort around physically separated lanes for bikes. A recent survey of drivers, pedestrians, and cyclists on major corridors in the Bay Area and Los Angeles, found that the more protected bicyclists are, the more comfortable drivers feel. This approach encourages the introduction of non-motorized movements where the needs of such travelers were previously overlooked or deprioritized.¹²

As the City of Concord plans for future generations of residents and travelers in the downtown, it should make it a goal to encourage increased physical activity through the built environment and pay specific attention to the environmental determinants of health disparities such as childhood obesity rates previously mentioned. Safer streets oriented towards bicyclists and pedestrians can facilitate much needed physical activity for Concord residents (See Section 4 for the economic benefits of planning for active transport).

1 PROTECTED INTERSECTIONS¹³

This innovative, non-standard approach to multi-modal streets employs a collection of design elements to make left turns simple and secure, right turns protected and fast, and provides straight through movements that minimize or eliminate conflicts from turning cars. Four main elements to protected intersection design are: a corner refuge island, forward stop bar for bicyclists, setback bike and pedestrian crossing, and bike-friendly signal phasing.

Together these design elements create a safe, clear experience for all people using the street. Signals control movements, refuge islands create protected spaces, and proper positioning of crossings and conflict points provides everyone with the time and space necessary to react to potential risks. Protected intersections reduce confusion for riders who previously have felt exposed, stranded or unsure of how to move through intersections.

2 CYCLE TRACKS¹⁴

A cycle track is an exclusive on-street facility similar to a bike lane, but also operates as a separated path. The infrastructure physically delineates a path for cyclists that is protected from motor traffic and separate from the sidewalk and parking lanes. Cycle track infrastructure provides space intended to be exclusively or primarily used for bicycles.

¹² Snyder, Tanya, 2013. In California Cities, Drivers Want More Bike Lanes. Here's Why.

<http://www.streetblog.org/2013/06/17/in-california-cities-drivers-want-more-bike-lanes-heres-why/>

¹³ Falbo, Nick, 2014. Protected Intersections for Bicycles. Annotated Transcript. 2014 Cameron Run Hays Outside the Box Competition.

https://www.protectedintersection.com/wp-content/uploads/2014/07/Falbo_Protected-Intersection_Transcript.pdf

¹⁴ National Association of City Transportation Officials (NACTO), 2013. Cycle Tracks. <http://nacto.org/sites-for-cycling/design-guides/cycle-tracks/>

Cycle tracks improve the real and perceived safety and comfort for cyclists. While cycle tracks are not yet a common amenity throughout the Bay Area, they are definitely garnering attention; several domestic and international examples have experienced much success when applied along streets with high motor vehicle volumes and/or speeds.

Similar to protected intersections, cycle tracks also promote a safe, multi-modal environment for all travelers. They reduce the risk and fear of collision with motor vehicles and offer specific protection for cyclists against dooring by parked cars—offering more protection than traditional bike lanes. They can help facilitate traffic flow by prevention of double-parking in bike lanes. The facility is attractive to cyclists of all abilities and ages; they increase the viability of bike travel for those less inclined to ride in traffic lanes.

Cycle tracks bring order and predictability to streets, provide transportation options, and facilitate a more vibrant streetscape environment. They allow neighborhoods to redevelop quickly, without waiting years for other public infrastructure or development projects.

3 COLORED BIKE FACILITIES¹³

Colored pavement may be used to draw attention to the unique function of a bike lane, or within conflict areas.

Colored bike facilities increase the visibility of cyclists and clearly highlight where road space is intended for bikes. The treatment both raises motorist and cyclist awareness of potential areas of conflict especially when applied to such areas where cross traffic may occur. Colored bike facilities increase comfort levels for cyclists and also encourage motorists to yield.

4 ACCESS MANAGEMENT¹⁴

The presence of multiple driveways creates many points of conflict between vehicles entering or leaving a street with bikes and pedestrians crossing the same path. Consolidating driveways and adding medians are a way to manage access to destinations and minimize conflict points.

¹³ NACTO, 2013. Colored Bike Facilities. <http://nacto.org/files-for-cycling-design-pdfs/ways-to-stop-marking-colored-bike-facilities/>

¹⁴ Model Design Manual for Living Streets. 2011. Model Design manual for Living Streets, Los Angeles County p4-12.

1



PROTECTED INTERSECTIONS
Source: Nick Febis, 2014

2



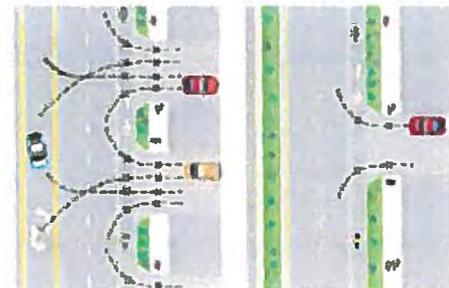
CYCLE TRACKS
Source: NACTO, 2012

3



COLORED BIKE FACILITIES
Source: NACTO, 2012

4



ACCESS MANAGEMENT
Model Design Manual for Lanes Streets, 2011

- **Recommendation 7:** To engender a Complete Streets environment in the downtown, the City of Concord should choose appropriate infrastructure and traffic calming measures that offer maximum safety to cyclists, pedestrians, and drivers that minimize motorist confusion. In doing so, the City can incrementally address the current status of its streets—that drivers have a steep learning curve to properly sharing the road with non-motorized travelers.
- **Recommendation 8:** The City should make the commitment to also build basic forms of infrastructure as sidewalks and high-visibility crosswalks where they currently are lacking in the plan area, especially in areas where pedestrians are present outside of the pedestrian priority zone.
- **Recommendation 9:** As part of a comprehensive strategy to create pedestrian- and bicycle-friendly streets, the City should adopt health-related performance targets tied to infrastructural improvements. For example, the City could set targets to reduce the childhood obesity rate, and to increase the average daily time walking or biking by a certain amount. The Plan should make a serious commitment that the City will seek out better strategies and infrastructural improvements that induce the amounts of walking and biking if the currently planned improvements do not meet their targets over time. These commitments should be followed through in more specific planning processes.

4. BENEFITS OF PLANNING FOR CYCLISTS AND PEDESTRIANS

Beyond crash reduction, road diets and bicycle/pedestrian amenities and infrastructure offer a host of health and economic benefits to communities:

- Road diets significantly reduce crashes. In a study of California and Washington sites predominantly in corridors within suburban areas surrounding larger cities (average population of 269,000), road diets were observed to reduce 19% of all crashes. This includes vehicle crashes with other vehicles, as well as vehicle crashes with pedestrians or cyclists.¹⁷
- Crash prevention helps businesses and individuals avoid huge economic losses. The National Safety Council illustrates the impact of fatal and nonfatal unintentional injuries on our nation's economy by estimating average costs per death, injury or crash. The average economic cost per death in 2011 was \$1.42 million; nonfatal disabling injury estimated at \$78,700. Motor vehicle injuries by severity have the following average economic costs: incapacitating injury at \$70,500, non-incapacitating evident injury at \$22,700, and possible injury at \$12,800.¹⁸ Given the concentration of crashes in the downtown, the City should respond to these estimated economic losses seriously and start by determining the infrastructure needed for prevention.
- Safer streets and roads save lives. Eighty percent of pedestrians struck by a car going 40 mph will die; at 30 mph the likelihood of death is 40%. At 20 mph the fatality rate drops to just 5%. Complete Street roadway design and engineering approaches create long-lasting speed reduction. All road users—motorists, pedestrians and cyclists—benefit from slower speeds. Below are a few national figures:
 - Of pedestrians killed in 2007 and 2008, more than 50% died on arterial roadways, typically designed to be wide and fast. More than 40% of pedestrian fatalities occurred where no crosswalk was available.¹⁹
 - Pedestrian crashes are more than twice as likely to occur in places without sidewalks; streets with sidewalks on both sides have the fewest crashes.²⁰ The lack of basic infrastructure such as sidewalks reinforces the auto-orientation of streets.
- Good bicycle/pedestrian infrastructure attracts users and promotes the mode shift away from auto travel. People are more likely to bike if protected bike lanes are available and walk where sidewalks and pleasant streetscapes are provided. Cities that have added protected bike lanes saw bike traffic growth. San Francisco saw a 115% increase and New York City a 190% increase.

¹⁷ HSIS, Evaluation of Lane Reductions "Road Diet" Measures on Crashes.

<http://www.fhwa.dot.gov/ohrt/roaddiets/research/1005710033.pdf>

¹⁸ National Safety Council, 2011. "Estimating the Costs of Unintentional Injuries."

http://www.nsc.org/news_research/injury_and_death_statistics/pages/EstimatingtheCostsofUnintentionalinjuries.aspx. "The calculable costs of motor vehicle crashes are wages and productivity losses, medical expenses, administrative expenses, motor vehicle damage, and employers' uninsured costs... Disabling injury is one which results in death, some degree of permanent impairment, or renders the injured person unable to effectively perform his or her regular duties for a full day beyond the day of injury."

¹⁹ US Department of Transportation, National Highway Traffic Safety Administration, 1999. Literature Review on

Vehicle Travel Speeds and Pedestrian Injuries Among Selected Racial/Ethnic Groups. Leaf, W., & Freusser, D

²⁰ Campbell, B., et al., 2004. A Review of Pedestrian Safety Research in the United States and Abroad. Federal Highway Administration Publication # FHWA-RD-03-042.

- **Safe, walkable environments encourage physical activity.** One study found that 43% of people with safe places to walk within 10 minutes of home met the recommended activity levels; among those without safe places to walk, just 27% met the recommendation.²¹
- **Cycling infrastructure is a cost-effective way to reduced health impacts and associated costs.**
 - A recent Centers for Disease Control and Prevention (CDC) study found that community-based physical activity interventions, such as new bike paths and trails, are "money well spent." They are more cost-effective than traditional preventive strategies in reducing new cases of many chronic diseases and improving quality of life. Interventions like enhanced access to bike paths reduce new cases of disease by:
 - 5-15 cases per 100,000 people for colon cancer;
 - 15-58 cases per 100,000 for breast cancer;
 - 59-207 cases per 100,000 for type 2 diabetes; and
 - 140-476 cases per 100,000 for heart disease.²²
 - The benefits of investments in cycle networks are estimated to be at least 4-5 times the costs, making such investments more beneficial to society than other transport alternatives.²³
 - If cycling participation increased enough to reduce obesity by about 3%, national medical expenditures could be reduced by \$6 billion.²⁴
 - In aggregate, our nation's annual cost attributable to obesity among full-time employees is \$73.1 billion.²⁵
- **Physical fitness is good for the economy.** People who ride their bikes regularly benefit in many ways:
 - Up to 32% use fewer sick days;
 - Up to 55% have lower health costs; and
 - Up to 52% have increased productivity.²⁴
 - Eighty-six percent of American workers are overweight and/or have chronic health troubles, costing companies \$153 billion in lost productivity each year.²⁷

²¹ Powell, K.E, Martin, L, & Chowdhury, P.P., 2003. Places to Walk: Correlates and Regular Physical Activity. American Journal of Public Health, 93, 1519-1521.

²² Roux et al., 2008. Cost Effectiveness of Community-Based Physical Activity Interventions. American Journal of Preventive Medicine, Vol. 33, Issue 6, pp. 478-500.

²³ Sallis et al., 2004. Cost-Benefit Analyses of Walkers and Cyclers Track Networks Taking into Account Insecurity, Health Effects and External Costs of Motorized Traffic. Transportation Research Part A, Vol. 38, Issue 8, pp. 593-606.

²⁴ Rashad, I., 2008. Cycling: An Increasingly Untouched Source of Physical and Mental Health. National Bureau of Economic Research Working Paper Series, 12929. http://www.nber.org/papers/w12929/pdf/new_windows

²⁵ Pinalstein, E., et al., 2010. The Costs of Obesity in the Workplace. Journal of Occupational and Environmental Medicine. <https://pubs.ascp.org/doi/abs/10.1093/aje/kwq004>

²⁶ US Department of Health and Human Services, 2002. Physical Activity Fundamental to Preventing Disease. <http://www.hhs.gov/ohrt/kd>

²⁷ Gallup-Healthyways in Simpson, L., 2011. Ailing and Overweight Americans Cost Billions in Productivity. <http://www.reuters.com/article/2011/10/17/us-illness-sick-days/STRE9G17XQ0111017>

- **Bikes are a boost to local businesses.** Bikes travel slower, stop more frequently, and are easier to park than cars that often zoom past local businesses. This difference in travel behavior increases cyclist likelihood of patronizing a business. People who arrive on bike may tend to spend less per visit, but visit more often. On average they spend more per month than their motorist counterparts.²⁸
 - With San Francisco's road diet, bike lanes, and wider sidewalks on Valencia Street, two-thirds (66%) of merchants said the increased levels of biking and walking improved business.
- **Walkability equals higher property values.** In most metro areas, every point increase on the 100 point Walk Score scale equals an increase of \$500-\$3,000 in home value.²⁹

➤ **Recommendation 10: The City should recognize the broader health and economic benefits of encouraging bicycling and walking in the downtown area capable of attracting investment and spurring redevelopment. As the data suggests, planning for pedestrians and cyclists (not just cars) brings vibrancy through street activation and encourages redevelopment sooner. As Concord finalizes its Draft Plan, it should see the great economic, health and safety benefits of planning for people.**

²⁸ PeopleForBikes and Alliance for Biking & Walking, 2014. Protected Bike Lanes Mean Business: How 21st Century Transportation Networks Help New Urban Economies Boom, p 28.

²⁹ Smart Growth America, 2013. The Many Benefits of Complete Streets PowerPoint Presentation, Slide 32. <http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/factbook/safety/>

5. SUMMARY OF RECOMMENDATIONS

- **Recommendation 1:** To develop both pedestrian priority zones and bike friendly streets, the Plan should specify that how downtown improvements to circulation will significantly seek to reduce the probability of crashes.
- **Recommendation 2:** The City should conduct further analysis for potential road diets in its downtown street network based on new data which suggests higher average daily traffic thresholds (up to 24,000) are feasible.
- **Recommendation 3:** The City should adopt a methodology for incremental bicycle/pedestrian-serving infrastructure improvements in the downtown that is tied to goals for reducing auto-trips and crashes.
- **Recommendation 4:** The Plan should explicitly state that its goals and recommendations for improving bike/pedestrian connectivity do not supersede the outcomes of other, more relevant and specific processes.
- **Recommendation 5:** The City should analyze collision hotspots and use the results to prioritize bicycle and pedestrian improvements in the plan area in order to ameliorate conflict points.
- **Recommendation 6:** The City should take a concerted effort in applying road diets as a traffic calming strategy to overcome barriers associated with the web of street typologies that exist in the plan area.
- **Recommendation 7:** To engender a Complete Streets environment in the downtown, the City of Concord should choose appropriate infrastructure and traffic calming measures that offer maximum safety to cyclists, pedestrians, and drivers that minimize motorist confusion.
- **Recommendation 8:** The City should make the commitment to also build basic forms of infrastructure as sidewalks and high-visibility crosswalks where they currently are lacking in the plan area, especially in areas where pedestrians are present outside of the pedestrian priority zone.
- **Recommendation 9:** As part of a comprehensive strategy to create pedestrian- and bicycle-friendly streets, the City should adopt health-related performance metrics tied to infrastructural improvements.
- **Recommendation 10:** The City should recognize the broader health and economic benefits of encouraging bicycling and walking in the downtown area capable of attracting investment and spurring redevelopment.

6. CONCLUSION

The City of Concord is taking strides towards planning for bicycle and pedestrian connectivity to the BART station via the greenway framework. A lot of regional dollars are being funneled into the City to engender the goal of walkable, bikeable streets beyond the plan area.

- One Bay Area Grant: Detroit Avenue Complete Streets Project - \$2.2M
- Safe Routes to Transit Grant: Concord Bike and Pedestrian Access to Transit - \$200K
- MTC Station Area Planning Funds: Downtown Concord Specific Plan and EIR - \$480K²⁰

Downtown Concord's specific challenge is how to engender this type of environment incrementally yet decisively, given the intertwined nature of street typologies in the downtown and current auto-centricity. The City also must keep be proactive in its efforts to reduce health disparities that can be ameliorated through the encouragement of increased physical activity through improvements in the built environment, namely the facilitation of active transport.

Street network improvements should specifically address the concentration of crashes on transit streets, and at minimum apply mitigation measures where hotspots exist taking into consideration crash severity. Should the plan fail to make serious commitment to traffic calming of auto-centric, transit streets, it does so at the cost of safer environments for walking and bicycling.

As the City plans for future generations of Concord residents, it should also be cognizant of the shift to car-lite lifestyles and downward trend of licensing rates. Nationally, the average young American is driving less and biking and taking transit more. The percent of people aged 16-24 with a driver's license peaked in 1983 (over 80%) and is now at its lowest rate since 1963 (about 60%).²¹

The City of Concord is well-poised for the realization of ambitious plans for its downtown that make better use of its transit infrastructure, and attracts businesses and residents that can benefit from a vibrant, walkable, bikeable downtown. However this vision can only be facilitated through smart investment and careful planning. This memo has aimed to reinforce the great need for bicycle and pedestrian infrastructure that can spur development sooner and encourage better quality of life in the downtown. Short of making these necessary improvements, the City and its residents will continue suffer economic, health and safety losses.

Given the current conceptual nature of improvements for cyclists and pedestrians in the Draft Plan, it follows that the Plan should not supersede more specific, fine-grained approaches to improving multi-modal circulation in the plan area. The City's Bicycle/Pedestrian Master Plan, Climate Action Plan, and a larger City effort to determine specific impediments for bicycle and pedestrian access to BART Stations with community leaders (via the Safe Routes to Transit grant) are most appropriate.

²⁰ Metropolitan Transportation Commission (MTC). 2012. MTC-funded Station Area/PDA Plans – Program Summary. http://www.mtc.ca.gov/StationArea/PDAPlans/summary_through_june_2012_grants.pdf

²¹ Frontier Group and US Public Interest Research Group (PIRG). 2013. A New Direction: Our Changing Relationship with Driving and the Implications for America's Future. <http://bit.ly/GXUbbZ>

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MEMO

TO: Joan Ryan, Senior Planner; Ray Kuzbari, Transportation Manager; Carol Johnson, Community Development Director
FROM: Ann Cheng, Program Director, and Jean Long, GreenTRIP Planner at Transform
DATE: January 28, 2014
RE: Recommendations for City of Concord's parking and transportation related land use policies for the Downtown Concord Specific Plan Final Draft – January 2014

Thank you and the City for your hard work on the Downtown Concord Specific Plan! We appreciate the time to discuss the following recommendations for the Downtown Specific Plan with you. We are very pleased to see that Concord's existing parking policies and proposed Specific Plan policies are headed in the right direction.

As you know, the City's Development Code, updated November 2013, already includes excellent parking policies that we support such as shared parking and parking maximums that prevent wasted spaces in transit-rich locations. This memo includes a list of recommendations for traffic reduction strategies in the context of parking and traffic policies in the proposed Specific Plan and building off the existing Development Code.

The current code acknowledges the importance of a transportation demand management (TDM) program to diminish parking demand. We suggest additional key TDM strategies, which are unbundled parking, free transit passes, and carshare memberships, to help reduce parking requirements and car ownership in new housing development.

We encourage the City to deepen the additive parking reductions from affordable housing, transit-oriented development, and TDM within the Specific Plan and future iterations of the Development Code. Some recommendations are paired with examples of similar policies found in other Bay Area cities. With some minor adjustments, the Specific Plan could be even more effective at helping the City of Concord achieve the goal of a healthy, thriving, convenient, safe, and walkable community in its Downtown!

Transit-Oriented Development Overlay District Map

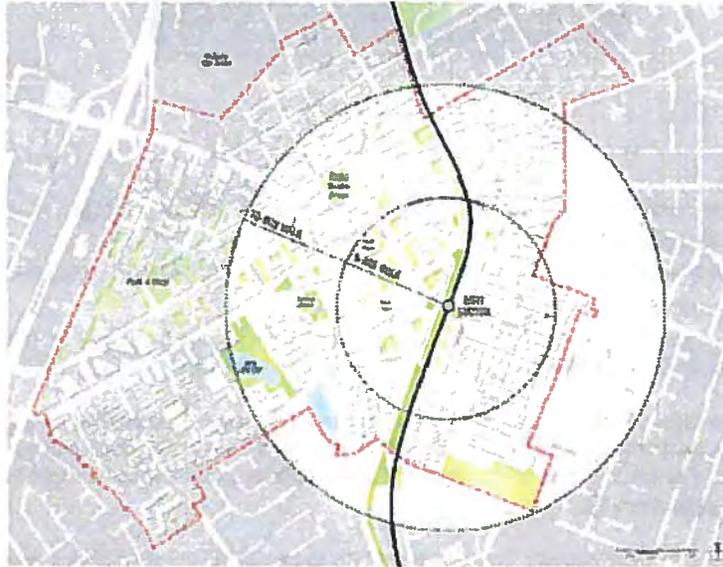


Figure 2-1 Walking radius from BART station

Existing Parking Facilities Map



Proposed Parking Regulations and Policies in Specific Plan

The Specific Plan includes several innovative strategies to support improved transportation choices that reduce traffic congestion while also making it easier to find parking. In general, we support these policies and encourage the City to adopt them with some adjustments. It appears the Specific Plan is integrating newly adopted development code policies. We hope there is an opportunity to explore going further to strengthen these policies to ensure growth can happen without gridlock.

We applaud the City's newly adopted parking policies in the development code. The existing code recognizes the need for less parking in locations within a half-mile of BART stations and other transit hubs. Additionally, parking standards for affordable housing found on Table 122-581.6 in the Development Code are even lower than the requirements for the transit overlay district. Additive parking reductions for proximity to transit and mixed use centers and housing affordability directly reflect multiple studies of actual parking utilization in similar areas with affordable housing.

Please consider amending the following proposed policies in the Specific Plan to include the following recommendations:

- 1. C-6.3: Modify parking requirements developments within the Specific Plan Area (as shown in Table 5-2).

Recommendation 1-A: Add existing parking policies of the Development Code into Table 5-2 in the Specific Plan (pg. 123) to show what the City has already adopted. Add a column for 50% less parking maximum for projects providing the most effective package of traffic reduction strategies suggested in Recommendation 1-B.

Summarizing recently adopted policies in one table will help remind everyone involved in the planning process of existing parking policies to build upon. It would also help to include a note on Table 5.2 stating that these requirements are both minimums and maximums, as defined in the code.

Table 5.2 Parking Requirements				(recommended additions to Table 5.2)		
Land Use	Unit	Transit Overlay District ¹	Non-Transit Overlay District ²	Existing Requirements		Proposed Additions
				Affordable Housing	Affordable Housing within TOD Overlay	TDM Strategies:
Multi-Family	Studio	0.70	1.0	0.67	0.5	50% reduction with implementation of all three strategies: 1) Unbundled parking 2) Free transit passes 3) Free carsharing memberships and spaces for shared cars
	1 Bdrm	1.25	1.5	1	0.75	
	2 Bdrm	1.5	2.0	1.5	1	
3 Bdrm or more	2.0	2.5	1.75	1.25		
Hotel	Per Room	0.75	1.0			
Retail	Per 1,000 sq ft	1.0	1.0			
Office	Per 1,000 sq ft	2.48	3.00			
Medical Office	Per 1,000 sq ft	2.0	2.0			
<small>(1) From Division 7, Chapter 122.186 for residential development (2) From Division 7, Table 122.395.1</small>				From Development Code - Table 122-581.6: Modified Parking Standards for Qualifying Affordable Housing and Mixed Income Developments		
(3) Parking requirements are both minimums and maximums. From Division 3, Section 122-385 for excessive parking.						

Reduced Parking Requirements through TDM Strategies

We are pleased to see a recommendation for the City to consider pairing further parking reductions with transportation demand strategies such as unbundled parking, transit passes, and carshare memberships in the Specific Plan (pg. 145). The current Development Code is a great starting point (see excerpt below), allowing a 25% maximum reduction for TDMs.

Figure 1: City of Concord. (2013). Development Code - Division 3, Section 122-386, Adjustments to Parking Requirements. pg. 49.

- (g) Other adjustments. For other uses that can demonstrate that due to special circumstances such as the nature of the use, proximity to transit, transportation characteristics of the use, or implementation of a transportation demand management program, there will be a reduced demand for parking at the site, the number of parking spaces required by Table 122-385.1 may be reduced by up to 25 percent. Reductions may be allowed subject to a Use Permit, as follows:
- (1) The parking demand study as directed by the City substantiates the need for less parking (e.g., documentation of customer frequency, information on parking standards required for the proposed use by other cities, etc.) than required in Table 122-385.1.
 - (2) The applicant has demonstrated that the project could provide additional parking if long-term parking demand requires additional parking, and
 - (3) Parking demand generated by the project will not exceed the capacity of or have a detrimental impact on the on-street parking in the surrounding area.

Recommendation 1-B: We encourage the City to consider an automatic parking reduction of 50% for any projects providing all three of the following strategies within the entire Downtown Plan Area:

- 1) free local bus transit passes (one per unit or employee)
- 2) 100% unbundling
- 3) free carsharing memberships and a space for a carsharing pod on site.

With this suite of these strategies, proven to be the most effective for traffic and vehicle ownership reduction, the City can encourage development of homes that are both more affordable and provide affordable transportation.

Free Transit Passes: The provision of free transit passes to residents and employees will incentivize transit use, especially in Downtown Concord. AC Transit and VTA have operated bulk transit pass purchase programs for the last 6-15 years. Their EasyPass and EcoPass programs provide significant discounts for passes purchased in bulk. For example, AC Transit charges \$120 for an annual transit pass when a minimum of 100 passes are purchased. TransForm's GreenTRIP Certification has shown that there are 10 developers so far are willing provide up to two free transit passes per household for 40 years. To date, there are also over 50 housing developments and more than 85 employers that are providing free passes as a result of these programs. Fortunately, Contra Costa County Connection is gearing up for the adoption of an EcoPass program this spring. Free transit passes, at least one pass per unit or per employee, can be required in new residential and businesses developments in the Plan Area.

City of Berkeley's [PTDM Zoning changes for the downtown](#) – adopted in 2012. The City of Berkeley recently adopted Zoning changes to require free transit passes for the downtown.

"H. For new structures or additions over 20,000 square feet, the property owner shall provide at least one of the following transportation benefits at no cost to every employee, residential unit, and/or G.L.A. resident. A notice describing these transportation benefits shall be posted in a location or locations visible to employees and residents.

*1. A pass for unlimited local bus transit service; or
2. A functionally equivalent transit benefit in an amount at least equal to the price of a non-discounted unlimited monthly local bus pass. Any benefit proposed as a functionally equivalent transportation benefit shall be approved by the Zoning Officer in consultation with the Transportation Division Manager."*

2. **C-6.4: Evaluate flexible parking standards to provide flexibility to developers as minimum parking requirements reduce feasibility of infill developments on small lots. Include requirements for unbundled parking from the purchase/rental price of residential units.**

Recommendation 2: We are thrilled to see the emphasis on flexible parking standards in the Specific Plan that allow developments to build "right-size" parking instead of constructing excessive parking only to meet requirements. We recommend an amendment to the Code, however, to also highlight flexibility as requirements are currently written as parking minimums and maximums intended to curb excessive parking. Ideally projects could start with less parking than originally approved with using landscape reserves or garage ceiling heights that could accommodate installation of parking lifts or stackers if parking demand exceeds initial supply.

We are also happy to see that unbundled parking will be required for new residential development (as noted in the Specific Plan) as we could not find mention of unbundling in the Development Code. Unbundled parking should also be required for non-residential development.

3. **C-6.5: Encourage carsharing through partnership with carsharing entities.**

Recommendation 3: To go a step further in defining what a partnership with carsharing companies could look like, the City should consider requiring provision of both carsharing parking spaces and free memberships in new developments for developments over a minimum size. Carsharing companies like ZipCar, City Car Share or GetAround, are expanding their service areas and are particularly interested in locating where cities are incentivizing carsharing instead of excess parking. Currently, there is one ZipCar pod at One Concord Center across from Concord BART station with two vehicles. Given planned growth in Downtown and near BART station, more pods will be needed.

We are happy to make introductions to City staff to the carsharing companies above so that all parties can jointly plan for service expansion in Downtown Concord and near both BART stations. Carsharing memberships can cost as little as \$50 a year. TransForm's GreenTRIP certification has encouraged a few developers to provide 40 years of free carsharing membership (at least 2 per household) for projects with a carshare pod on site or within a ¼ mile of the site.

City of Berkeley's [PTDM Zoning changes for the downtown](#) were adopted in 2012. The City of Berkeley recent Zoning changes also included required carsharing space provision for new downtown developments.

"1. For residential structures constructed or converted from a non-residential use that require vehicle parking under Section 23E.68.080.B, required parking spaces shall be designated as vehicle sharing spaces in the amounts specified in the following table. If no parking spaces are provided pursuant to Sections 23E.68.080.D or 23E.28.090.C, no vehicle sharing spaces shall be required.

Number of Parking Spaces Required Minimum	Number of Vehicle Sharing Spaces
0 – 10	0
11 – 30	1
30 – 60	2
61 or more	3, plus one for every additional 60 spaces

1. The required vehicle sharing spaces shall be offered to vehicle sharing service providers at no cost.

2. The vehicle sharing spaces required by this Section shall remain available to a vehicle sharing service provider as long as providers request the spaces.

If no vehicle sharing service provider requests a space, the space may be leased for use by other vehicles. When a vehicle sharing service provider requests such space, the property owner shall make the space available within 90 days."

4. **GOAL C-6: A parking supply that supports Downtown businesses and stimulates economic growth, while not promoting excessive driving.**

Recommendation 4: We are pleased to see included in the Implementation plan strategy T-3 E and T-3 F. To further support this goal we recommend including an explicit goal of ensuring 15% availability of street parking on any given block to ensure parking is not impacted as new development fills in the Downtown and BART Station areas. This is equivalent to about 1 out of 7 spaces on an average block face and is a parking management industry standard.

Downtown Walnut Creek has an established parking enterprise zone that is currently implementing demand based pricing to ensure parking availability while allocating a portion of the revenues to support downtown business activities and to improve transportation choices for safer and more complete streets including expanding free downtown shuttle service, widening sidewalks and increased pedestrian and bicycling safety measures. We would be happy to introduce staff to Matt Huffaker, Assistant City Manager in charge of this program in Walnut Creek to Concord staff for further discussion.

5. Policy C-4.3: Increase bicycle parking in the public realm.

Figure 2: City of Concord (2013) Development Code - Division 3, Section 122-393, Bicycle Parking Pg.61

122-393	Bicycle Parking
Bicycle parking shall be provided for all multi-family projects and non-residential uses in compliance with this section.	
(a)	Requirements for short-term bicycle parking
(1)	Required number of spaces Short-term bicycle parking spaces shall be provided equal to five percent of the required vehicle spaces, with a minimum of two spaces per site.

Recommendation 5: The Specific Plan includes a policy for more bicycle parking in public areas, but does not mention if it is on- or off-street bike parking in new development. Currently, the Development Code policies link bicycle parking in multi-family and nonresidential developments to vehicle parking requirements (as shown in the excerpt above).

We recommend decoupling bicycle parking from vehicle parking. Bicycle parking should be tied instead to square feet of use proposed so the amount for required bicycle parking is determined independent of car parking spaces. This ensures that bicycle parking is not reduced as reductions for car parking are applied. Additionally, the different requirements for both long-term and short-term bicycle parking for residents and guest parking located on street, should also be included in the Specific Plan.

The City of Oakland's bicycle parking ordinance is a very thorough code example, distinguishing between short and long term parking requirements as well as ideal bike parking dimensions and design guidelines.

<http://www2.oaklandnet.com/oakca1/groups/pwa/documents/report/oak025007.pdf>

Another example is the Garden Village project in Downtown Berkeley, which has been designed for car-free living. The building will provide permanent bicycle storage hooks within each unit for two bicycles, yielding 162 secured bicycle parking spaces. In addition, the development will also have 24 bicycle lockers will be installed at grade level, 34 basement spaces, and 8 on-street bicycle racks will be installed near the building entrance for short-term visitor parking. The project demonstrates the diversity in the types of bicycle parking that can be made available in new developments aiming to reduce vehicle parking.

<http://www.discovergardenvillage.com/student-life/>

II. Appendix: U.S. Census Transportation Data Comparison: Concord Citywide vs. Downtown

Table 1: Vehicle Ownership – Comparison between Concord City and Downtown Concord Specific Plan Area

Concord Citywide			Downtown Concord Specific Plan Area (Census Tract 3280, 3350, 3361.02)			Concord TOD 1/2 mile radius of the BART Station (CNT, TOD Database.org)		
Total Households	Households with Zero Vehicles		Total Households	Households with Zero Vehicles		Total Occupied Housing Units	Households with Zero to 1 Vehicle	
44,634	2,613	6%	5,120	933	18%	2,417	1,481	61%

U.S. Census Bureau. (2012). American Factfinder. Retrieved from <http://factfinder2.census.gov/>
 Center for Transit-Oriented Development (with CNT). (2012). TOD Database. Retrieved from <http://toddata.cnt.org/>

Below is a comparison of vehicle ownership and means of transportation to work from Census data to provide additional demographic context between the City of Concord as a whole and the Plan Area. We drew data from Census Tracts that covered the majority of the Plan Area but did not include data from census tracts that only covered a small portion of the Plan Area. This analysis is a general profile of the Plan Area. Detailed data for transportation is not available by block group.



From LEHD On the Map: Downtown Concord Specific Plan Area highlighted in pink. Census Tracts outlined in green. Block groups labeled numerically. Selection of Census Tracts 3280, 3350, 3361.02 used for estimates of Specific Plan Area.

Planning Area Boundaries cover Census Tracts:
 3280 (Block Groups 1 and 2);
 3290 (approximately southern quadrant of Block Group 4);
 3310 (approximately western third of Block Group 3);
 3350 (Block Group 3);
 3361.02 (Block Groups 2, 3, 4 and northern quadrant of Block Group 1); and
 3552 (southern quadrant of Block Group 4)

Recent Census estimates suggest that households with zero car ownership in the DCSP Plan Area (18%, 933 households) is proportionally higher than the City of Concord as a whole (6%, 2,142 households). In fact, 61% of households within a half mile of a Concord TOD own either zero or 1 vehicle.

The Plan Area also has a higher proportion of commuters (38%) who carpool, take public transit, walk, or use other non-vehicular modes compared to the citywide percentage (26%). 18% of households in the Plan Area do not have vehicles, but there is room for improvement to boost numbers of commuters who get to work without driving alone. These findings indicate that vehicle ownership is less common in the high frequency transit served areas and residents who have access to transportation options are less likely to drive to work. With fewer car trips expected from a TOD, amending parking requirements will help reduce traffic congestion and save scarce real estate from being turned into lots that could otherwise be dedicated to other economic uses.

Table 2: Means of Transportation to Work – Comparison between Concord City and Downtown Concord Specific Plan Area
U.S. Census Bureau. (2012). American Factfinder. Retrieved from <http://factfinder2.census.gov/>

Concord Citywide			Downtown Concord Specific Plan Area				
			Census Tract 3280	Census Tract 3350	Census Tract 3361.02	Total	Percent
Vehicle - drove alone	41,188	70%	457	1,192	2,198	3,847	60%
Carpool	7,233	12%	162	253	517	932	15%
Public Transportation	6,552	11%	206	173	477	856	13%
Walk	650	1%	71	16	214	301	5%
Taxi, bike, other means	1,403	2%	-	42	257	299	5%
Worked from home	2,205	4%	18	55	88	161	3%
Total	59,231	100%	914	1,731	3,751	6,396	100%

Sources:

Center for Transit-Oriented Development (with CNT). (2012). TOD Database. Retrieved from <http://toddata.cnt.org/>

U.S. Census Bureau. (2014). Longitudinal Employer-Household Dynamics (LEHD) – On the Map. Retrieved from <http://onthemap.ces.census.gov/>

U.S. Census Bureau. (2012). American Factfinder. Retrieved from <http://factfinder2.census.gov/>

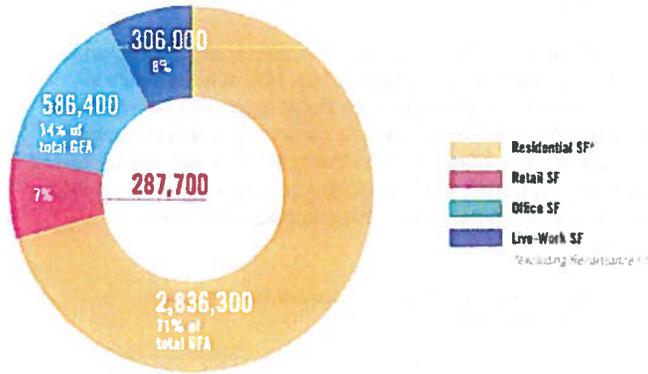
B08201 HOUSEHOLD SIZE BY VEHICLES AVAILABLE, 2012 ACS 1-year Estimates (Concord city)

B08201 HOUSEHOLD SIZE BY VEHICLES AVAILABLE, 2008-2012 ACS 5-year Estimates (Census Tracts 3280, 3350, and 3361.02, Contra Costa County)

B08141 MEANS OF TRANSPORTATION TO WORK BY VEHICLES AVAILABLE, 2007-2011 ACS 5-year Estimates (Census Tracts 3280, 3350, and 3361.02, Contra Costa County)

Appendix C

PREFERRED PLAN: HOUSING FOCUS PHASE 1



MARKET-RATE HOUSING	AFFORDABLE HOUSING	TOWN HOMES	WORK-LIVE LOFTS	TOTAL
2,040 units	860 units	95 units	236 units	3,220 units
				8,080 residents
Residential density 50du/acre – 130du/acre (assuming average 1,000sf unit)				1,960 employees

Block	Use Type	GFA	FAR
Block A	RESIDENTIAL	271,767	2.0
Block B	RESIDENTIAL	42,105	2.0
	RETAIL	59,123	
Block C	RESIDENTIAL	45,974	2.3
	RETAIL	12,779	
Block D	RESIDENTIAL	260,528	1.7
	PARTY STRUCTURE	319,483	
Block J	RETAIL	50,578	1.2
Block K	OFFICE	327,666	2.9
Block L	RESIDENTIAL	119,284	3.1
Block M	RESIDENTIAL	306,527	1.6
Block N	RESIDENTIAL	143,316	1.4
Block O	RESIDENTIAL	58,584	0.8
Block P	MIXED USE (live-work)	261,600	2.2
Block Q	RETAIL	14,922	0.8
Block R	RETAIL	22,694	1.0
	MIXED USE (live-work)	28,800	
Block S	RETAIL	15,048	2.0
	RESIDENTIAL	52,122	
Block T	RESIDENTIAL	112,689	2.2
	RETAIL	12,074	
	MIXED USE (live-work)	75,800	
Block U	RESIDENTIAL	263,875	2.4
Block V	RESIDENTIAL	242,457	1.7
	RETAIL	11,309	
Block W	RESIDENTIAL	153,992	2.2
Block X	RESIDENTIAL	477,752	2.2
Block Y	OFFICE	258,738	3.3
Block Z	RETAIL	48,570	0.9
Block A1	RESIDENTIAL	95,354	2.2
	RETAIL	20,880	
Block A2	RETAIL	12,490	1.0
Block A3	RETAIL	7,269	1.0



February 24, 2014

Joan Ryan
 Senior Planner, City of Concord
 1950 Parkside Dr. MS/53
 Concord, CA 94519
 (925) 671-3370

Re: Concord Downtown Specific Plan SEIR Addendum

Dear Joan Ryan,

Greenbelt Alliance appreciates the opportunity to comment on the **Concord Downtown Specific Plan SEIR Addendum** (Addendum).

Greenbelt Alliance is the champion of the places that make the Bay Area special. We defend the Bay Area's natural and agricultural landscape from development and we help create great cities and neighborhoods – healthy places where people can walk and bike, communities with parks and shops, transportation options, and homes that are affordable. We have been active in Concord for several years, working directly with Concord residents, the Community Coalition for a Sustainable Concord and East Bay Housing Organizations to help create a thriving, livable City of Concord.

We are pleased that the City of Concord allowed the public to review the SEIR Addendum. However, considering the importance of the document for reviewing various new policies for the Downtown Concord Specific Plan (Specific Plan), we are concerned that the Addendum's comment period deadline of February 24 did not allow for adequate public participation. Greenbelt Alliance and East Bay Housing Organizations, along with many of our Concord allies and residents, were not aware of the comment period deadline until after the notes from the 2/4/14 City Council update were posted. There were no public announcements of the comment period to recipients of the City's downtown planning updates or the Downtown Steering Committee itself. We hope that future documents will provide much more clarity on the public review process and that deadlines for review will be clearly posted on the City's website.

Recommendation: Include a Land Use section of the Addendum to update mitigation strategies included in the Concord 2030 General Plan (2030 Plan) EIR

Although we recognize that the Specific Plan contains many of the same policies for Downtown Concord as detailed in the 2030 Plan and subsequent updates, the SEIR Addendum should include additional feasible mitigation strategies to address the significant impacts of development over the next several decades. Providing clear description and analysis of these mitigations, especially in light of Concord's new Climate Action Plan (CAP), will help to ensure that the Specific Plan accommodates growth in ways that improve public health, achieve environmental goals, and enhances the vitality of Concord's downtown.

Recommendation: The Land Use section of the Addendum should consider potential mitigations from policies that are being developed in the City's Housing Element Update, as these planning efforts were intended to work in tandem

The Housing Element update for the City of Concord is taking place concurrently with the drafting of the Specific Plan. Many of the policies in the Housing Element could greatly benefit very low- to moderate-income residents of Concord as development occurs downtown. The SEIR Addendum should include mitigation strategies that coincide with updates to the Housing Element as a way to increase the supply of homes for low-income residents near transit – thereby reducing single occupancy vehicle trips – and reduce the risk of displacement of current residents.

Recommendation: The Greenhouse Gas and Transportation/Circulation sections of the Addendum should include enhanced bicycle and pedestrian infrastructure as a mitigation strategy to further reduce harmful effects of GHGs and VMTs

We are pleased that the Specific Plan and Addendum include several policies in support of a downtown that is safe to walk and bike, with less reliance on parking, and connected to regional transportation. In order to achieve the 30-year vision of the Specific Plan, additional measures should be included to reduce GHGs and VMTs.

The Addendum should consider the 30-year potential for enhancements to the bicycle and pedestrian network as a mitigation strategy to reduce greenhouse gases and VMTs. The Specific Plan makes many positive changes to the circulation of traffic downtown, and the forthcoming Bicycle Master Plan will make further changes. The Addendum will be strengthened by clear mitigation strategies that will achieve a thriving, pedestrian-oriented Downtown Concord.

There is also no mention of enhanced bicycle and pedestrian infrastructure having a positive impact on lowering VMTs in the Addendum Appendix A. We encourage the City to use the city's Climate Action Plan and the expertise of Fehr & Peers to create robust mitigation strategies to reduce the significant impacts of development. Long-term infrastructure improvements to the downtown area for pedestrians and bicyclists should be considered an asset and central strategy for reducing the impacts over the lifetime of this Specific Plan.

Thank you again for the opportunity to comment on the Addendum and we look forward to sharing more detailed comments on the Specific Plan in the near future.

Sincerely,



Joel Devalcourt
Regional Representative, East Bay
Greenbelt Alliance

From: Adam Foster <adamwfoster@gmail.com>
Sent: Monday, February 24, 2014 2:07 PM
To: Ryan, Joan
Cc: Johnson, Carol; Concord City Council; Barone, Valerie
Subject: Downtown Specific Plan SEIR Addendum

Hi Joan,

I offer the following comments on the Downtown Specific Plan SEIR:

I do not believe the noise and safety hazards associated with continuing to run high-speed vehicular arterial streets through the downtown has been adequately analyzed or addressed.

I believe the noise and potential for fatal accidents between different users associated with continuing to run high-speed vehicular arterial streets through a residential area, particularly given that the area is planned to accommodate significant residential and pedestrian growth, creates a significant environmental impact.

I live at Willow Pass Road and Port Chicago Highway. Cars racing down Willow Pass Road create an undesirable acoustical environment and threaten the safety of all users of the public right-of-way, detracting from my quality of life. I believe that residential-area roadways that are designed to accommodate vehicular traffic at speeds above 25 MPH -- more than just speed signage, but the actual design (lane width, excess on-street parking, rapid-flow intersections, ect.) -- like Willow Pass Road, Clayton Road, Concord Boulevard, Galindo Street and Port Chicago Highway, take away from the health and welfare of adjacent residents and pedestrians. While I realize that I chose to purchase a home within an area where these conditions already existed, I am not in favor of a long-range document, that addresses these very streets, being adopted without additional measures being taken to reduce the noise, health and safety hazards associated with high-speed vehicular travel occurring within an area where people live, work and play.

These are streets where the elderly, disabled and children travel. Surely there is responsibility to be assumed in creating a safe environment for these an all other users.

Thank you,

Adam Foster

