

March 16, 2010

Lafayette Planning Commission &
 Ms. Ann Meredith, Community Development Director
 City of Lafayette
 3675 Mt. Diablo Blvd., Suite 210
 Lafayette, CA 94549

Re: Initial Comments for Downtown Lafayette Specific Plan
 Draft Environmental Impact Report
 State Clearinghouse Number 2009062056

Dear Planning Commissioners and Ms. Meredith,

Enclosed please find attached as a PDF a copy of the "Expected Fault Displacements along the BART Concord-Bay Point Line, Alameda and Contra Costa Counties, CA" completed at the request of BART in 2006.

Of particular concern is the anticipated displacements expected to occur in Lafayette. The narrative in this document as it pertains to the Draft Environmental Impact Report is contained in Chapter 4.0 "Expected Displacement At The C-Line/Contra Costa Shear Zone Crossing", pages 33 to 51.

Table 5. Expected fault displacements (in feet) at the C-Line from the 475-yr Scenario Earthquake on the Contra Costa Shear Zone, for selected cumulative probabilities.

Return Period	Scenario Earthquake	Cumulative Probability				
		2.5%	16%	50%	84%	97.5%
475 yr	M6.8	0.7 ft	1.4 ft	2.6 ft	4.9 ft	8.8 ft
475 yr	M7.1	<u>1.4 ft</u>	<u>2.6 ft</u>	<u>5.0 ft</u>	<u>9.4 ft</u>	<u>17.1 ft</u>
	<i>Average:</i>	1.1 ft	2.0 ft	3.8 ft	7.2 ft	13.0 ft

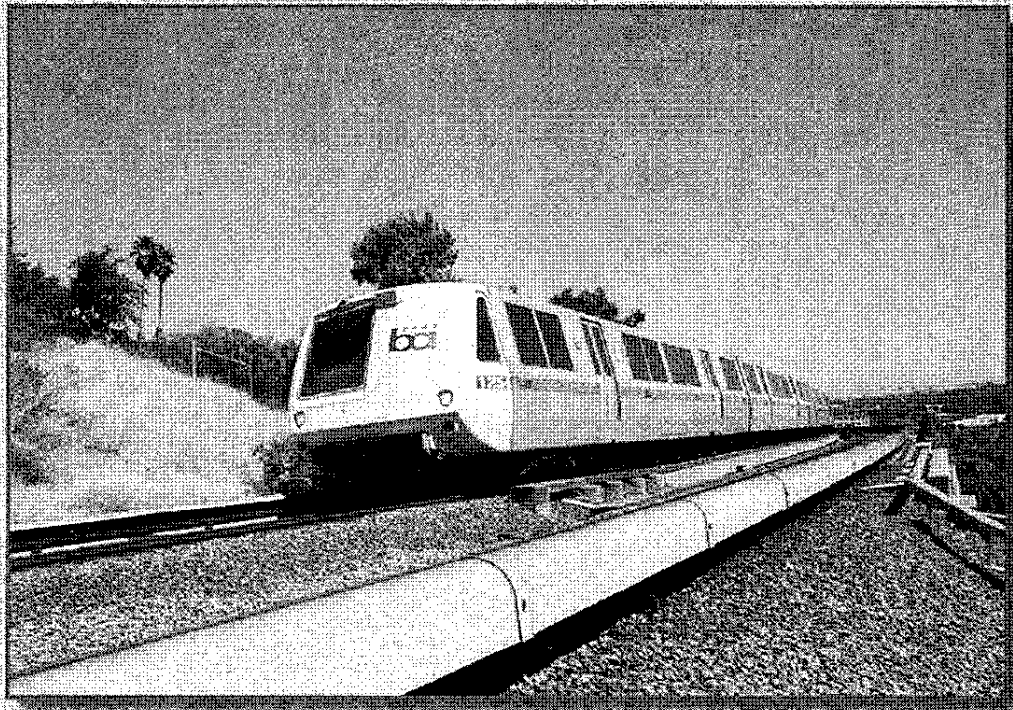
Please include the pages 33 through 51 (which includes the above table) in the Consultants Final EIR because of the significant potential impacts to the Eastern end of Lafayette.

Sincerely,
Lynn Hiden
 649 Los Palos Drive
 Lafayette, CA 94549

51-1

WILLIAM LETTIS & ASSOCIATES, INC.

Expected Fault Displacements along the BART Concord-Bay Point Line, Alameda and Contra Costa Counties, California



51-2

Submitted to:
Bay Area Rapid Transit District
300 Lakeside Drive, 17th Floor
Oakland, CA 94604

Submitted by:
William Lettis & Associates, Inc.
1777 Botelho Drive, Suite 262
Walnut Creek, CA 94596

February 2006



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February 9, 2006

Mr. Ed Matsuda
 Bay Area Rapid Transit District
 300 Lakeside Drive, 17th Floor
 Oakland, CA 94604

Subject: Expected Fault Displacements along the BART Concord-Bay Point line, Alameda and Contra Costa Counties, California

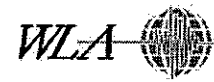
Dear Ed:

Enclosed please find 4 copies of the report titled above. As you know, the BART Bay Point-Concord line crosses the active Hayward fault in the Berkeley Hills Tunnel, the potentially active Contra Costa Shear Zone (CCSZ) in the cities of Lafayette and Walnut Creek, and the active Concord fault in the city of Concord. This report specifically addresses the expected amounts and distributions of fault offset that could occur where the C-Line crosses these three faults, for scenario earthquakes having a return period of 475 years (a 10% probability of occurrence in 50 years). We provide the cumulative amount of displacement expected along the C-Line during the scenario earthquakes, for the 50%, 84%, and 97.5% cumulative probability levels.

To summarize, surface rupture on the Hayward fault during the 475-yr (M7.0 to M7.2) event is expected to produce about 6.5 ft of right-lateral displacement (84% cumulative probability) of the Berkeley Hills Tunnel and perhaps as much as 2.0 ft of up-on-the-east vertical displacement. Surface rupture on the Reliez Valley fault during the 475-yr (M6.8 to M7.1) event on the CCSZ is expected to produce about 2.9 ft of right-lateral displacement (84% cumulative probability) at or near the Pleasant Hill Road aerial structure, with perhaps as much as 0.9 ft of vertical displacement. Surface rupture on the Saklan fault during this same event on the CCSZ is expected to produce about 1.8 ft of right-lateral displacement (84% cumulative probability) of the Walnut Creek Aerial Guideway. Roughly 50% to 75% of this displacement (0.9 to 1.4 ft) may occur as up-on-the-west vertical displacement. Surface rupture on the Concord fault during the 475-yr (M6.5 to M6.9) event is expected to produce about 0.7 ft of right-lateral displacement (84% cumulative probability) of the Systron Drive aerial structure, and less than 0.1 ft of vertical displacement. These displacements will be distributed over various distances along the BART line, as described in the report. In addition, active fault creep will continue to deform both the Berkeley Hills Tunnel and the Systron Drive aerial structure.

We develop recommendations to assist BART in preparing for future fault displacements of the C-Line. First, we recommend that BART personnel monitor all the C-Line fault crossings to identify possible creep-related damage to facilities and to complete appropriate maintenance activities. Second, if expected displacements on faults within the CCSZ are critical to future engineering design, we recommend additional geologic analyses to define fault activity, and, if active, to better define the exact fault locations, widths, and senses of slip. Lastly, we recommend that appropriate BART emergency response and maintenance personnel be fully aware of the possible fault-rupture locations, through field-based workshops and/or development of field-appropriate checklists at each fault crossing.

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cont.



It has been a pleasure to work with you on this project. We look forward to receiving your comments and to finalizing the report. Please do not hesitate to call if you have any questions or require further information.

Regards,
WILLIAM LETTIS & ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "Keith Kelson". The signature is fluid and cursive.

Keith Kelson, C.E.G. 1610
Principal Geologist

Enclosures
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**Expected Fault Displacements along the BART Concord-Bay Point Line,
Alameda and Contra Costa Counties, California**

Submitted to:

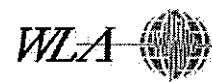
Bay Area Rapid Transit District
300 Lakeside Drive, 17th Floor
Oakland, CA 94604

Submitted by:

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1777 Botelho Drive, Suite 262
Walnut Creek, CA 94596

February 9, 2006

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EXECUTIVE SUMMARY

The BART C-Line (Bay Point-Concord) crosses three major strike-slip faults in the eastern San Francisco Bay region: (1) the active Hayward fault in the Berkeley Hills Tunnel, (2) the potentially active Contra Costa Shear Zone in the cities of Lafayette and Walnut Creek, and (3) the active Concord fault in the city of Concord. This report addresses the expected amounts and distributions of fault offset that could occur where the C-Line crosses these three faults. Our effort included review of existing geologic and geotechnical data for each fault crossing, review of previous displacement estimates, analysis of aerial photography, and field reconnaissance to evaluate the location, orientation and width of each crossing. We quantified the expected amount of coseismic rupture at each of the fault crossings for scenario earthquakes having a return period of 475 years (a 10% probability of occurrence in 50 years). We use new empirical relationships between earthquake magnitude and maximum surface displacement developed from historical earthquakes, and, because all three faults experience some aseismic creep, incorporate the effects of creep on both earthquake magnitude and the amount of surface displacement. Based on geologic information from each specific fault crossing, we estimate the distribution of expected displacement along the C-Line at each fault crossing. The resulting analysis yields graphs showing the cumulative amount of displacement expected along the C-Line during the scenario earthquakes, at the 50%, 84%, and 97.5% cumulative probability levels.

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The C-Line crosses the Hayward fault in the Berkeley Hills Tunnel, with a geometry that results in primarily right-lateral offset with a small component of extension. Active creep on the Hayward fault is substantial, accounting for approximately 60% of the long-term slip rate on the fault near the tunnel. Geologic logs of the tunnel and our field observations suggest that the Berkeley Hills Tunnel crosses the Hayward fault zone over a distance of about 980 ft (300 m) wide, including a primary strand at about MP 4.84 and secondary fault strands at about MP 4.75 and MP 4.92. The 475-yr scenario earthquake (M7.0 to M7.2) on the Hayward fault is expected to produce right-lateral displacements with cumulative probabilities of 50%, 84%, and 97.5%, as given in Table ES-1. Surface rupture on the fault during the scenario earthquake will produce about 6.5 ft of right-lateral displacement (84% cumulative probability) of the Berkeley Hills Tunnel, and perhaps as much as 2.0 ft of up-on-the-east vertical displacement. These displacements likely will be distributed unequally across the fault zone, with a maximum occurring at the primary fault strand at about MP 4.84. Aseismic creep will likely continue to deform the Berkeley Hills Tunnel at a rate of about 3.5 ± 0.5 mm/yr (0.14 ± 0.02 in/yr).



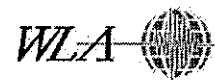
Table ES-1. Expected right-lateral displacements (in feet) across primary fault zones crossed by the C-Line, for cumulative probabilities of 50%, 84%, and 97.5%.

Fault Crossing	Return Period	Cumulative Probability		
		50%	84%	97.5%
Hayward Fault	475 yr	3.3 ft	6.5 ft	12.4 ft
Contra Costa Shear Zone (all)	475 yr	3.8 ft	7.2 ft	13.0 ft
Concord Fault	475 yr	0.3 ft	0.7 ft	1.4 ft

The C-Line crosses the Contra Costa Shear Zone (CCSZ) over a distance of about 2.2 miles between the Lafayette and Walnut Creek stations (from about MP 12.85 to MP 15.05). The CCSZ consists of four potentially active fault strands: the West Lafayette (MP 12.95), Lafayette (MP 13.20), Reliez Valley (MP 13.55), and Saklan (or “Franklin”, MP 14.99) faults. The C-Line crosses the first three of these faults in a nearly orthogonal geometry that will result in primarily right-lateral offsets with small components of extension. The C-Line crosses the West Lafayette and Lafayette faults at grade, but it crosses the Reliez Valley fault near or at the Pleasant Hill Road aerial structure. Geologic data suggests that the Saklan fault likely consists of two strands that cross the Walnut Creek Aerial Guideway at Highway 680, each of which has an acute geometry that will result in contraction of the aerial structure. Possible west-up reverse faulting may also produce contraction of the C-Line across these faults. The 475-yr scenario earthquake (M6.8 to M7.1) on the CCSZ is expected to produce right-lateral displacements with cumulative probabilities of 50%, 84%, and 97.5%, as given in Table ES-1. Surface rupture on the Reliez Valley fault during the scenario earthquake on the CCSZ will produce about 2.9 ft of right-lateral displacement (84% cumulative probability) at or near the Pleasant Hill Road aerial structure, and perhaps as much as 0.9 ft of vertical displacement. Surface rupture on the Saklan fault during this same event on the CCSZ will produce about 1.8 ft of right lateral displacement (84% cumulative probability) of the Walnut Creek Aerial Guideway, of which perhaps 50% to 75% (0.9 to 1.4 ft) could occur as up-on-the-west vertical displacement.

The C-Line obliquely crosses the Concord fault about 1500 ft south of the Concord station, with a geometry that results in right-lateral offset and a large component of contraction. The rate of active creep on the Concord fault is substantial, accounting for nearly the entire long-term slip rate on the fault. The location of the fault at the C-Line crossing is well known based on prominent evidence of fault creep beneath the Systron Drive aerial structure, as well as nearby trenches and prominent geomorphic

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expression. There is possible evidence of recent, fault-related deformation of the aerial structure and adjacent track. The primary strand of the Concord fault crosses the C-Line at about MP 20.5, although secondary deformation probably extends from about MP 20.46 to MP 20.54 as a result of the oblique geometry of the crossing. The 475-yr scenario earthquake (M6.5 to M6.9) on the Concord fault is expected to produce right-lateral displacements with cumulative probabilities of 50%, 84%, and 97.5%, as given in Table ES-1. Surface rupture on the Concord fault during the scenario earthquake will produce about 0.7 ft of right-lateral displacement (84% cumulative probability) of the Systron Drive aerial structure, and less than 0.1 ft of vertical displacement. These displacements will likely be distributed across the fault zone from MP 20.46 to MP 20.54, with a maximum occurring at about MP 20.50. Aseismic creep will likely continue to deform Systron Drive aerial structure at a rate of about 3.1 ± 0.5 mm/yr (0.12 ± 0.02 in/yr).

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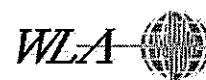


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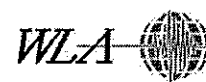


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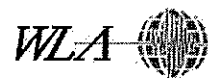
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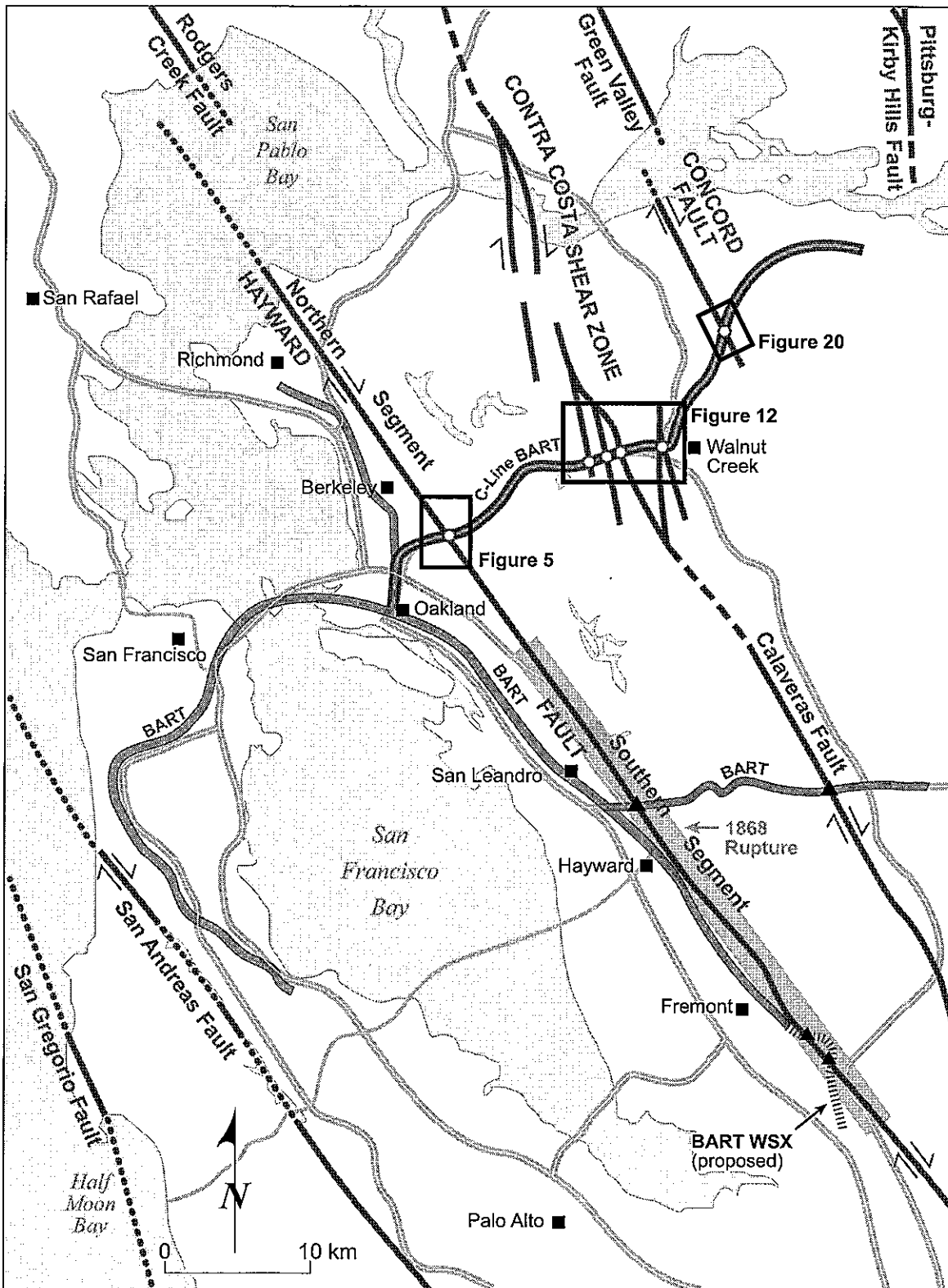


1.0 INTRODUCTION

The San Francisco Bay area lies along an active system of faults forming the boundary between the North American and Pacific plates, and consisting of the San Andreas, Hayward-Rodgers Creek, and Calaveras fault, as well as other active faults. The BART C-Line (Bay Point-Concord) crosses three major active or possibly active strike-slip faults in the eastern San Francisco Bay region (Figure 1). Specifically, the C-Line crosses (1) the active Hayward fault in the Berkeley Hills Tunnel, (2) the potentially active Contra Costa Shear Zone in the towns of Lafayette and Walnut Creek, and (3) the active Concord fault in the city of Concord (Figure 2). We assess, based primarily on existing geologic information, the expected amounts and distributions of fault offset that could occur where the C-Line crosses these three faults. This work represents an update of previous estimates of fault offset generated during studies for the BART Systemwide Seismic Vulnerability Study (Bechtel/HNTB, 2002), and involves a re-assessment of expected displacements considering the effects of active fault creep.

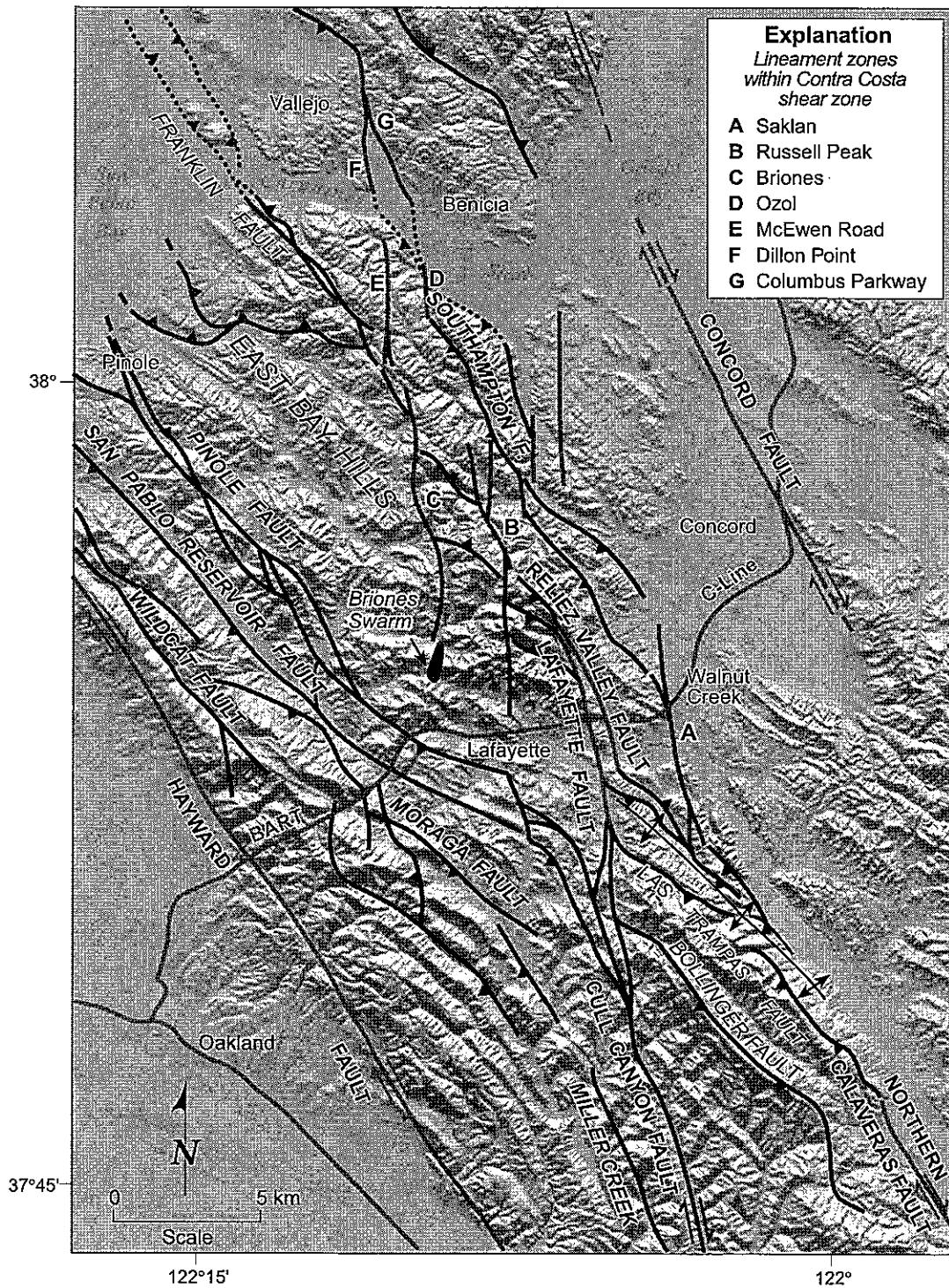
This report was completed by Keith Kelson (C.E.G. 1610), and Stephen Thompson (P.G. 7912), with the assistance of Robert Givler and Jason Holmberg (all with William Lettis & Associates, Inc. [WLA]). Technical review comments from William Lettis (WLA) improved this report. We acknowledge the assistance of Ed Matsuda, Michael Brown, Hamed Tadafoghi, Robert Myers, James Wang, and Eric Fok (all with BART), and Chip Mallare (HNTB) in obtaining relevant data and conducting field reconnaissance at various fault crossings.

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Figure 1. Regional map of the BART system and primary faults in the Bay Area, showing fault crossings addressed in this report (red circles) and other fault crossings (black triangles). Approximate area of surface rupture from the 1868 Hayward earthquake is shaded in olive green.



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Figure 2. Regional tectonic map of the northern East Bay Hills, showing BART C-line, traces of major faults and inferred fault sections. Gray lines show mapped faults with reverse or oblique movement, red lines show previously mapped strike-slip faults, and purple lines show inferred dextral faults along lineament zones (after Unruh and Kelson, 2002).



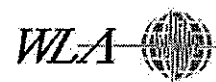
2.0 TECHNICAL APPROACH

Our approach for evaluating coseismic fault displacements along the BART C-Line at the three fault crossings involved (1) analysis of existing information, (2) field reconnaissance, (3) scenario-based fault displacement hazard analysis, and (4) preparation of this report. Our data compilation included review of existing geologic and geotechnical data for each fault crossing, review of previous displacement estimates, analysis of aerial photography, and field reconnaissance to evaluate the location, orientation and width of each crossing. We developed data on possible amount of coseismic rupture, incorporating likely effects of fault creep, and estimated the distribution of slip along the C-Line at each fault crossing. This effort follows a similar approach to our analysis of the Warm Springs Extension crossing of the Hayward fault in Fremont (WLA, 2003b), augmented with the development of displacement values for various probabilities given the occurrence of a scenario earthquake.

For this fault displacement hazard analysis, we use empirical relationships between earthquake magnitude and maximum surface displacement developed from historical continental strike-slip earthquakes (Wells and Coppersmith, 1994). This global dataset consists mainly of earthquakes on faults that do not display significant surface creep, whereas two of the three faults examined in this study – the Hayward and Concord faults – have a rate of aseismic fault creep at the surface that is a significant fraction of their geologic slip rate. Treatment of near-surface fault creep affected several steps in the analysis, because both the determination of coseismic near-surface fault rupture and estimate of earthquake frequency-magnitude relations for each fault depend on geological and geophysical models of aseismic creep within Earth's crust.

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The steps in this scenario-based fault displacement analysis include: (1) evaluation of scenario earthquakes based on the Working Group on California Earthquake Probabilities WG02 model (WGCEP, 2003) and that model's treatment of fault creep; (2) determination of near-surface fault creep rate at each crossing, and calculation of the expected ratio by which near-surface coseismic slip will be reduced; (3) re-evaluation of empirical relationships between maximum surface displacement and earthquake magnitude for global continental strike-slip earthquakes; (4) determination of displacement across each fault zone based on maximum displacement, a scaling factor for surface displacement at each crossing as a fraction of the maximum displacement, and a near-surface coseismic slip accumulation ratio that accounts for fault creep; (5) evaluation of the width and orientation of each fault zone crossing; and (6) determination of the expected distribution of coseismic displacement along the C-Line at each fault



crossing. The results of the analysis are presented in cumulative probability and cumulative displacement graphs for each scenario earthquake at each of the three fault crossings. Details of our approach are provided in the following sections.

2.1 Selection of Scenario Earthquakes

Scenario earthquakes selected for the Hayward fault, the Contra Costa Shear Zone (CCSZ), and the Concord fault include the approximately 475-year return period event (i.e., 10% probability in 50 years) for each of the three faults, plus the historical 1868 M6.8 Hayward earthquake for the Hayward fault. We rely heavily on frequency-magnitude relations developed by the U.S. Geological Survey (WGCEP, 2003; referred to as “WG02”) for the Hayward and Concord faults. Because WG02 did not address the CCSZ as a specific seismic source, we assume that the CCSZ has frequency-magnitude characteristics similar to the northern Calaveras fault, which projects northward into the CCSZ (Unruh and Kelson, 2002). As explained in detail below, we provide two different magnitudes for the 475-yr event for each of the three faults of interest, because of uncertainty in scientific understanding of how active fault creep affects earthquake recurrence and magnitude. We estimate the amount of expected displacement at each fault crossing for the 475-yr event using the average of the displacements determined for the two magnitude estimates.

The WG02 study calculated frequency-magnitude relations for each major fault in the San Francisco Bay region (Figure 4.8 in WGCEP, 2003). The 475-year return period earthquakes, as determined from WG02, are listed in Table 1. Motivated by evidence that aseismic processes may relieve elastic strain energy at seismogenic depths, WG02 (WGCEP 2003, see their Appendix B) attempted to incorporate these processes in the frequency-magnitude relations by introducing a seismogenic scaling factor, R . This scaling factor varies from $R=0$, where all geologic slip on a fault is accommodated by aseismic processes, to $R=1$, where all geologic slip occurs as coseismic displacement during earthquakes. The R factor was used to reduce the seismogenic area, A , of faults in the San Francisco Bay region through the equation $A = W * L * R$, where W and L are fault width and length, respectively. Because moment magnitude M is calculated from A , it follows that M scales with R (WGCEP, 2003). Therefore, the effects of fault creep are incorporated in the WG02 frequency-magnitude relations, which potentially results in a “double counting” of fault creep if creep is assumed to occur only in the near-surface and not at seismogenic depths.

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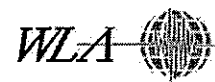


Table 1. Scenario Earthquakes for the Hayward Fault, the Contra Costa Shear Zone and the Concord Fault.

Fault Scenario	Return Period	Hayward Fault ⁽¹⁾ Scenario Earthquake	CCSZ ⁽²⁾ Scenario Earthquake	Concord Fault ⁽³⁾ Scenario Earthquake
Creeping Fault Model (WG02)	475 yr	M7.0 (R ~ 0.7)	M6.8 (R ~ 0.5)	M6.5 (R = 0.5)
Locked Fault Model	475 yr	M7.2 (R=1)	M7.1 ⁽⁴⁾ (R=1)	M6.9 (R=1)
Historic Analog (1868 earthquake)	150 yr	M6.8	-	-

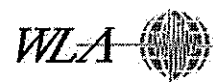
Notes:

The WG02 model developed frequency-magnitude relations and R values for the: ⁽¹⁾Hayward-Rodgers Creek fault, ⁽²⁾Calaveras fault (as an approximation for the CCSZ), including the predominantly creeping southern and central segments; and ⁽³⁾Concord-Green Valley fault (WGCEP, 2003).

⁽⁴⁾ Magnitude for Calaveras fault from Figure 6.11, WGCEP (2003). Other R=1 magnitudes recalculated based on tabulated fault segment dimensions, R values, and weighted M-logA relations presented in WGCEP (2003).

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cont.

Because the effects of aseismic creep at seismogenic depths on both earthquake magnitude and coseismic surface displacement are unknown, we take an end-member approach to incorporate the effects of the WG02 seismogenic scaling factor into our determination of scenario earthquake magnitude. The first row of Table 1 presents the 475-year return period earthquakes for the Hayward, Calaveras, and Concord faults based on WG02 frequency-magnitude relations and the corresponding *scaled* mean R values. The second row of Table 1 presents the same 475-year event recalculated so that R=1, using the tabulated R values and area-magnitude model relations and weights described in the WG02 report (WGCEP, 2003). Magnitudes in this second row approximate the 475-year event with the effects of creep removed from the WG02 model. These values are accurate to about 0.05 magnitude units, based on comparison with an R=1 frequency-magnitude relationship determined for the Calaveras fault that was presented in a sensitivity analysis (WGCEP, 2003, their Figure 6.11). The two magnitude values for the 475-year event (for each fault shown in Table 1) are intended to provide upper and lower bounds on the “true” effects of aseismic creep in the seismogenic crust on (1) earthquake magnitude and (2) expected coseismic surface displacement. Because the WG02 fault model incorporates creep processes through a reduction of seismogenic area (and thus magnitude), rather than through a reduction of fault slip rate, the WG02-determined magnitudes represent reasonable lower bounds.



The third row of Table 1 presents the historical 1868 M6.8 (± 0.3) Hayward earthquake on the Hayward fault (Bakun, 1999), which has an estimated return period of about 150 years (WGCEP, 2003). We include this earthquake in our analysis because it represents a possible characteristic earthquake on the Hayward fault (Lettis, 2001).

2.2 Assessment of Near-Surface Creep

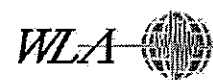
The rate of “deep” slip (as approximated by the average long-term geologic slip rate) and the rate of creep on a fault at or near the ground surface are critical information needed for estimating expected amounts of displacement during a large-magnitude earthquake. Fault creep causes elastic strain to accumulate across the near-surface sections of a fault at a slower rate than at seismogenic depths, where the fault is more likely to be locked. Creeping sections of a fault should, on average, experience proportionally lower amounts of coseismic slip than sections that do not creep.

In order to quantify the effect of fault creep on the amount of surface fault rupture at each fault crossing, we compared the local rate of fault creep v_c , with the rate of long-term geologic slip, v_g , and adjust the expected amount of surface displacement accordingly (WLA, 2003b). We assume that the amount of coseismic displacement at the ground surface is proportional to the near-surface slip accumulation ratio, R_s , defined by:

$$R_s = [v_g - v_c] / v_g = 1 - [v_c / v_g] \quad (1)$$

The near-surface slip accumulation ratio is simply the difference between the geologic slip rate and the surface creep rate divided by the long-term geologic slip rate (WLA, 2003b). An R_s value of 0 implies that the surface creep rate equals the geologic slip rate, and no slip is stored in the near-surface to be released coseismically in the next earthquake. An R_s value of 1 implies that the surface creep rate is zero and that the amount of slip accumulated at depth equals the amount of slip accumulated at the surface. This amount is available for coseismic release during a large earthquake. The R_s ratio is comparable to the seismogenic scaling factor R introduced in the WG99 model and used in the WG02 study (WGCEP, 1999; 2003), with the important difference being that the R factor attempts to describe aseismic processes within the seismogenic portion of the crust, whereas the R_s value describes the difference in rates between surface creep and the “deep” slip rate only. As a point of comparison, our analysis for the Berkeley Hills Tunnel crossing of the Hayward fault determined an $R_s = 0.61 \pm 0.27$ (2 standard deviations). The WG02 determined an $R = 0.6 \pm 0.2$ for the northern and southern segments of the Hayward fault. The R factor

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cont.



for the Hayward fault suggests that the amount of seismic moment available for release in the next earthquake will be about 60% of that on a totally locked fault with equivalent dimensions. In contrast, our R_s value states that the amount of near-surface slip available for release in the next earthquake will be about 61% of that on a non-creeping fault experiencing a comparable magnitude earthquake.

2.3 Re-Evaluation of Empirical Relationships between Maximum Displacement and Magnitude

To estimate the expected displacement at the fault crossings along the three fault zones, we use empirical relations between earthquake magnitude and maximum surface displacement derived from a global earthquake dataset similar to that developed by Wells and Coppersmith (1994) (hereafter “WC94”). The earthquakes used in our regression are restricted to 46 continental strike-slip earthquakes with well resolved estimates of moment magnitude (M) and maximum surface displacement (MD) (Table 2). Because most of the earthquakes used in these regressions occurred on faults that are not known to creep, these empirical relations yield approximate displacements during scenario earthquakes as if creep had not occurred prior to rupture.

Table 2. Strike-slip earthquakes used in regression of maximum displacement (MD) on magnitude (M).

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cont.

WC94 EQ#	Event Year, Name, Location	M	Maximum Displacement (m)	Ref.
7	1906 San Francisco, CA	7.90	6.1	1
10	1920 Kansu, China	8.02	10.0	1
15	1930 North Izu, Japan	6.89	3.8	1
17	1931 Kehetuohai-E, China	7.92	14.6	1
19	1932 Cedar Mtn, NV	6.83	2.0	1
26	1940 Imperial Valley, CA	6.97	5.9	1
40	1951 Damxung, China	7.67	12.0	1
43	1953 Canakkale, Turkey	7.22	4.4	1
47	1954 Fairview Peak, NV	7.17	4.1	1
48	1954 Dixie Valley, NV	6.94	3.8	1
49	1956 San Miguel, Mexico	6.63	0.9	1
52	1957 Gobi-Altai, Mongolia	8.14	9.4	1
65	1966 Varto, Turkey	6.88	0.4	1
67	1967 Mogod, Mongolia	7.03	1.3	1
68	1967 Mudurna Valley, Turkey	7.34	2.6	1
69	1967 Dibra, Albania	6.75	0.5	1
71	1968 Borrego Mountain, CA	6.63	0.4	1
73	1968 Dasht-e-Bayaz, Iran	7.23	5.2	1
83	1970 Tonghai, China	7.26	2.7	1



WC94 EQ#	Event Year, Name, Location	M	Maximum Displacement (m)	Ref.
87	1971 Bingol, Turkey	6.63	0.6	1
96	1973 Luhuo, China	7.47	3.6	1
112	1976 Montagua, Guatemala	7.63	3.4	1
121	1976 Caldiran, Turkey	7.23	3.5	1
128	1977 Bob-Tangol, Iran	5.89	0.3	1
138	1979 Homestead Valley, CA	5.55	0.1	1
141	1979 Coyote Lake, CA	5.77	0.2	1
144	1979 El Centro, CA	6.53	0.8	1
145	1979 Kurizan, Iran	6.61	1.1	1
146	1979 Koli, Iran	7.17	3.9	1
148	1980 Greenville, CA	5.82	0.03	1
158	1981 Daofu, China	6.64	1.5	1
175	1983 Pasinier, Turkey	6.73	1.2	1
177	1983 Guinea, West Africa	6.32	0.5	1
192	1985 Constantine, Algeria	6.00	0.1	1
215	1987 Elmore Ranch, CA	6.20	0.2	1
216	1987 Superstition Hills, CA	6.61	0.9	1
221	1988 Lancang-Gengma, China	7.13	1.5	1
222	1988 Gengma, China	6.83	1.1	1
233	1990 Luzon, Philippines	7.74	6.2	1
240	1992 Landers, CA	7.34	5.3	1,2
-	1995 Hyogo-ken Nanbu, Japan	6.9	2.5	3
-	1999 Hector Mine, CA	7.1	5.5	4
-	1999 Kocaeli (Izmit), Turkey	7.4	5.2	5
-	1999 Düzce, Turkey	7.1	5.0	6
-	2001 Kunlun, China	7.8	16.3	7
-	2003 Denali, AK	7.9	8.8	8

References: (1) Wells and Coppersmith (1994) events considered reliable and not on known creeping fault; (2) McGill and Rubin (1999); (3) Awata et al. (1995) with update by Okumura (1995); (4) Treiman et al. (2002); (5) Barka et al. (2002); (6) Akyuz et al. (2002); (7) Lin et al. (2003); (8) Eberhart-Phillips et al. (2003) and Haeussler et al. (2004).

The historical strike-slip earthquakes in Table 2 provide an update on the WC94 strike-slip event database (Wells and Coppersmith, 1994) (Figure 3). Forty earthquakes were used from the WC94 earthquake database for which both M and MD were considered reliable by those authors. We explicitly excluded the 1966 Parkfield, California event from the regression because it occurred on a creeping section of the San Andreas fault, and we wish to restrict the regression to events on non-creeping faults. We include six additional large magnitude continental strike-slip earthquakes that occurred since publication of WC94.

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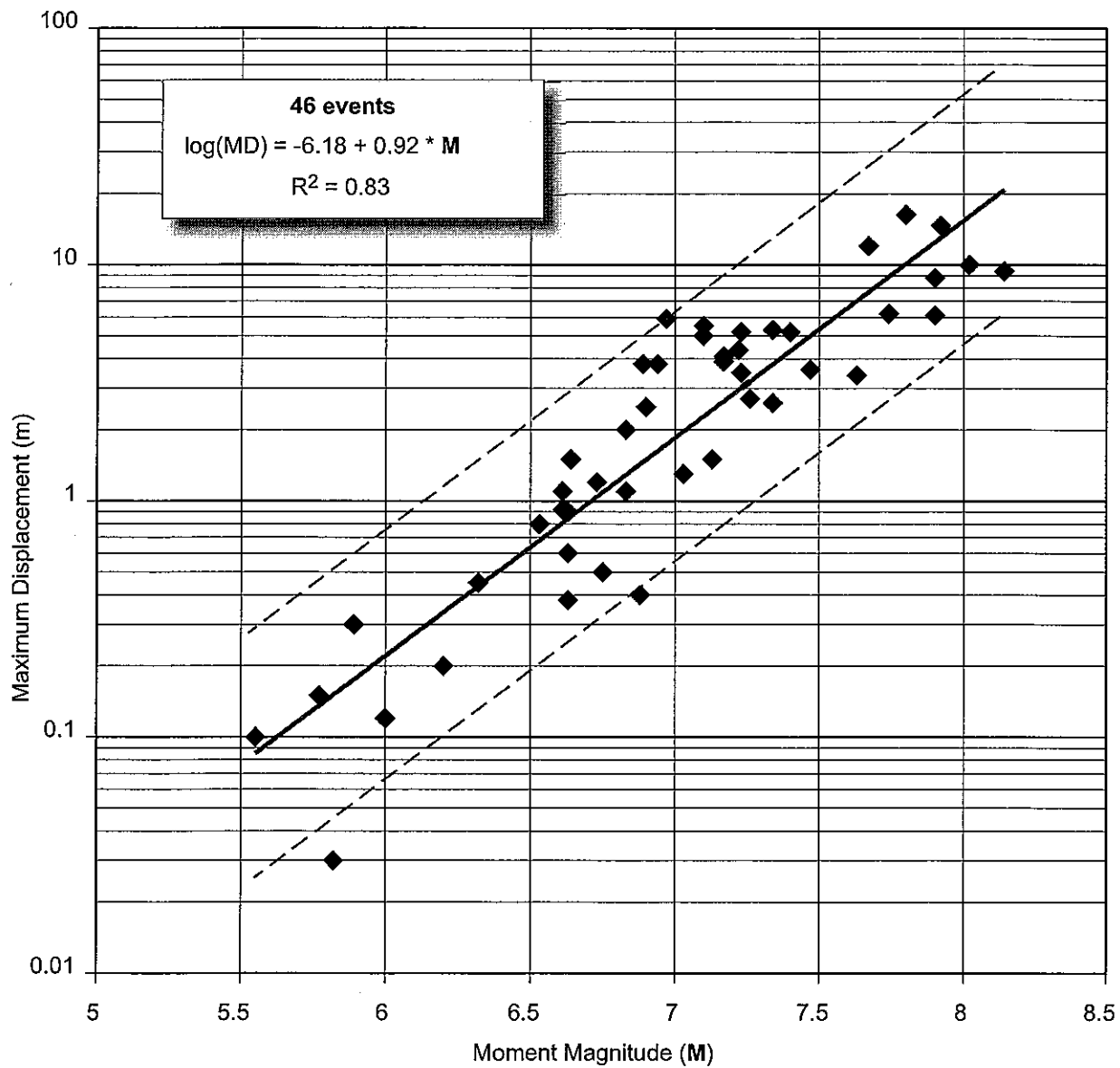
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Figure 3. Regression of maximum displacement (MD) on moment magnitude (M) for 46 continental strike-slip earthquakes (see Table 2). Solid line and regression equation show the best-fit least-squares regression, and dashed lines show approximate 95% confidence bands for predicting MD at a given M.

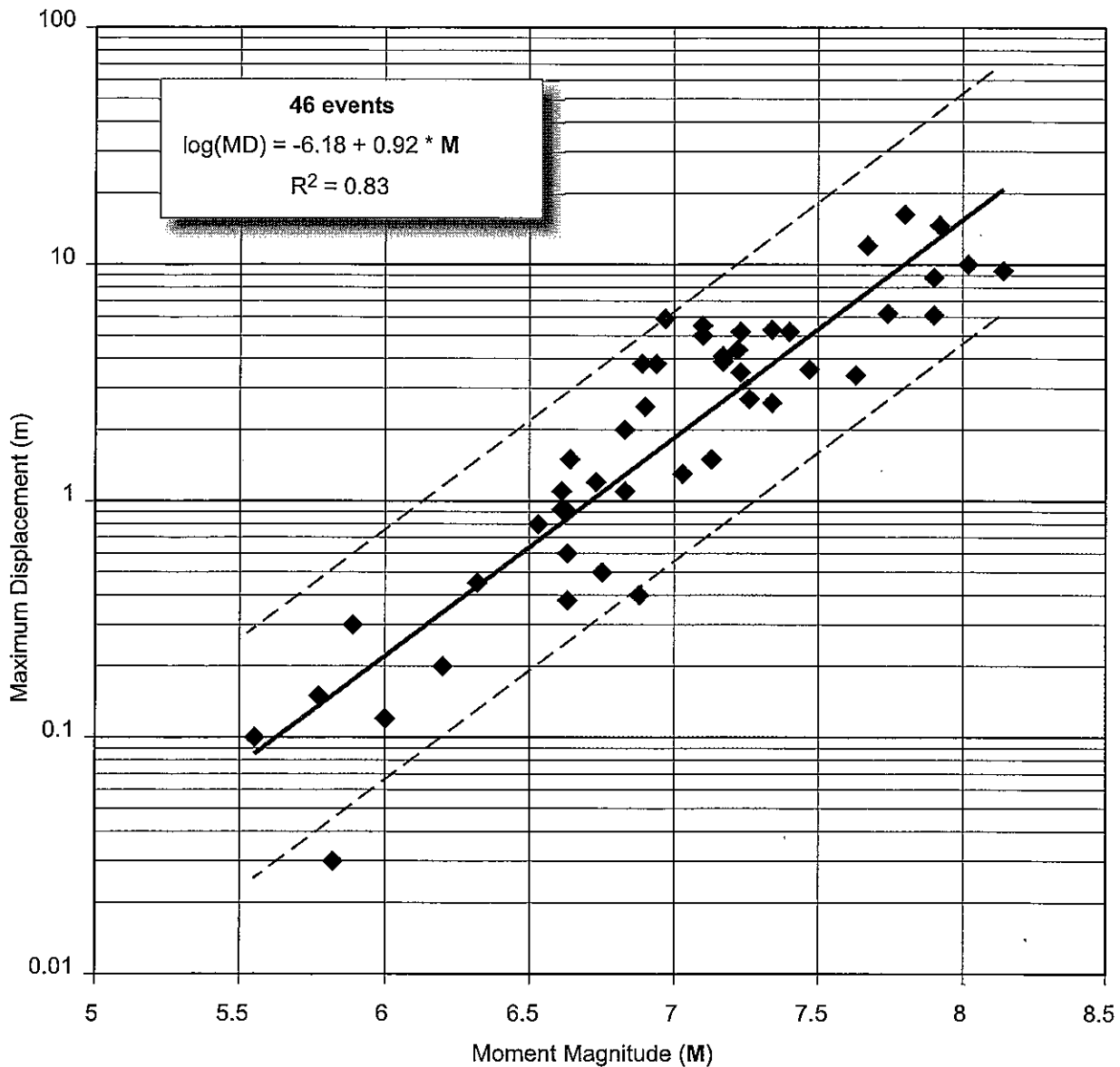
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Figure 3. Regression of maximum displacement (MD) on moment magnitude (M) for 46 continental strike-slip earthquakes (see Table 2). Solid line and regression equation show the best-fit least-squares regression, and dashed lines show approximate 95% confidence bands for predicting MD at a given M.



Also, the maximum displacement for the 1992 Landers, California event was revised from 6.0 m (used in WC94) to 5.3 m based on the reevaluation of McGill and Rubin (1999).

Our revised regression of $\log(\text{MD})$ on M based on the least-squares method is:

$$\log(\text{MD}) = -6.18 + 0.92 * M \quad (2)$$

The regression has an R^2 value of 0.83 and a standard error on $\log(\text{MD})$ of 0.26. The regression has a moment magnitude range of 5.55 to 8.14 and a displacement range of 0.03 to 16.3 meters. The solid line on Figure 3 is the best-fit regression line, and the dashed lines show 95% confidence bands for predicting $\log(\text{MD})$ at a particular value of M . The coefficients of the updated regression equation are not statistically different from the WC94 regression of $\log(\text{MD})$ on M , although the standard error on $\log(\text{MD})$ in our regression (0.26) is less than the reported standard deviation of the WC94 regression (0.34).

2.4 Determination of Expected Surface Displacement

In order to estimate surface displacement at a fault crossing for a scenario earthquake, we modify the maximum displacement values resulting from Equation 2 to account for (1) the likelihood that surface displacement at the fault crossing will be less than the maximum displacement value for the scenario earthquake, and (2) the supposition that surface creep during the interseismic period will reduce the expected amount of coseismic slip for a given scenario earthquake. The equation to estimate net displacement across a given fault zone D_s is:

$$D_s = \text{MD} * S * R_s \quad (3)$$

where MD is maximum displacement from the regression, S is a scaling factor to adjust the maximum displacement value to a more likely site displacement, and R_s is the near-surface slip accumulation ratio (Section 2.2). Our calculations use a Monte Carlo analysis that simulates maximum displacements for a statistically high number of events (10,000) for each scenario earthquake. MD is calculated from Equation 2 plus a normally distributed random error term $\pm t * s_e$, where s_e is the standard error in $\log(\text{MD})$ and t is the t statistic under the degrees of freedom of the regression at the 68th percentile. Because it is unlikely that the maximum displacement will occur exactly at the fault crossing, we use a scaling factor, S , that adjusts the expected displacement at the fault crossing to be between 50% and 100% of the

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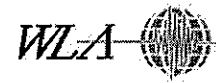
maximum displacement. This range provides an appropriate level of conservatism based on surface slip distributions along well studied historical fault ruptures (Treiman et al., 2002; Haeussler et al., 2004) and the uncertainty in the location of the fault crossings with respect to likely ends of surface ruptures. We assign S a randomly-generated value between 0.5 and 1.0 with a uniform distribution, similar to previous studies for the BART system (Bechtel/HNTB, 2002). The slip accumulation ratio, R_s , is incorporated in the Monte Carlo analysis with a normal probability distribution that is truncated at the 95% confidence level or at the upper and lower limits of R_s ($R_s = 1$ and $R_s = 0$).

The results of each simulation produce probability density functions of D_s for each scenario earthquake, portrayed as cumulative probability curves for the scenario earthquake. Because the values of MD in the regression equation are based on net displacement and not horizontal (i.e., strike-slip) displacement, we state an estimated horizontal to vertical slip ratio to determine the relative components of strike-slip and dip-slip displacement. Results for the 50% cumulative probability (median), 16% and 84% cumulative probability (68% confidence interval), and 2.5% and 97.5% cumulative probability (95% confidence interval) are tabulated. Also tabulated is the 475-yr event displacement, which is determined by averaging the displacements calculated for each of the two magnitude estimates for the 475-yr return period event (Table 1). Plots of cumulative probability versus displacement show continuous curves for the 475-year event displacement for all three fault crossings and the 150-year event (M6.8) for the Hayward fault crossing. The 50%, 84%, and 97.5% cumulative probability displacement values for the 475-year event (and 150-year event for the Hayward fault) are then distributed across the widths of the fault zones at each crossing, as described in Section 2.5 below.

2.5 Evaluation of Fault Zone Width and Distribution of Surface Displacement

Surveys of historical surface ruptures in California, Turkey, and Taiwan show that the total amount of surface displacement across a fault zone occurs as rupture along primary faults as well as distributed deformation adjacent to primary faults (Lawson, 1908; Kelson et al., 2001; Rockwell et al., 2002; Treiman et al., 2004). The distribution of slip across a fault zone may strongly influence the seismic demands imposed on lifelines (i.e., pipelines, transportation corridors) during surface fault rupture (Kelson et al., 2004b; Bray and Kelson, 2006). For example, if the total amount of slip during a large earthquake is concentrated within a narrow fault zone, the local demand on built structures may exceed the capacity of the structure and cause damage or failure. If slip is distributed over a longer distance, the local seismic demand may be less and damage will likely be less. As a specific example, the proposed BART Warm Springs Extension in Fremont obliquely crosses a complex Hayward fault zone within

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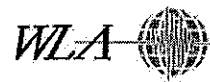


which the expected surface displacement is distributed over a broad zone (WLA, 2003b). Because the distribution of slip across a fault zone may affect structural performance of BART facilities, we consider cross-fault slip distributions in this analysis.

The three localities where the C-Line crosses active or potentially active fault zones all have important differences with respect to fault-crossing geometry or geologic conditions that will affect the amount of coseismic slip imposed on the tracks during a large earthquake. First, the Berkeley Hills Tunnel crosses the Hayward fault about 170 ft beneath the ground surface, and is surrounded by pervasively sheared and fractured bedrock near the fault zone. As noted in Section 3.2 below, the fault zone consists of several fault strands over a considerable distance (about 900 ft). This complex fault zone likely serves to distribute the total near-surface displacement onto several strands within a broad zone, thus decreasing the local coseismic demand on the tunnel (see Section 3.4 below).

The C-Line crosses several fault strands within the CCSZ, which likely accommodate the total amount of coseismic slip. Based on the continuity and geomorphic expression of individual fault strands within the CCSZ, we estimate the relative amounts of coseismic slip that likely will occur along the C-Line. In addition, where the C-Line crosses individual faults within the CCSZ and the Concord fault, the fault crossings are underlain near-surface sediments. Based on recent examples from large historical earthquakes (Bray and Kelson, 2006), these geologic conditions will allow fault displacements to be distributed over a broad zone. The occurrence of the 1999 Düzce (Turkey) earthquake provided a unique opportunity to characterize the distribution of surface rupture amounts across an active, right-lateral strike-slip. This M7.1 earthquake produced ground rupture over about 41 km, and thus is a good analogy for ruptures that likely will occur during the scenario earthquakes addressed in this analysis. During the 1999 Düzce earthquake, a substantial percentage of the total surface displacement occurred as distributed deformation away from the primary fault rupture (Rockwell et al., 2002). Through detailed surveying of linear features displaced by the surface rupture (e.g., alignments of trees, fence lines, walls, canals), Rockwell et al. (2002) showed that as much as 15% of the total lateral slip occurred as bending or drag in a zone typically 5 to 20 m wide. This distributed strain occurred mostly in areas underlain by alluvial sediments, which may act to disperse the strain in a broader zone. Similar amounts of near-fault bending were documented along the San Andreas fault near Fort Ross (Sonoma County) and near Crystal Springs Reservoir (San Mateo County) as a result of the 1906 San Francisco earthquake (Lawson, 1908; Bray and Kelson, 2006). Because there have been no historic surface ruptures on the CCSZ or the Concord fault, we rely on the rupture characteristics documented by Lawson (1908) and Rockwell et al. (2002), and the

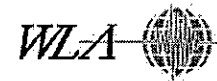
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site-specific characteristics of the CCSZ and the Concord fault (as described below), to estimate the distribution of offset at these fault crossings. We estimate the distribution of slip across faults within the CCSZ and across the Concord fault based on the pattern of slip distribution (about 40% to 85% on primary faults, remainder as off-fault deformation) documented for historical surface ruptures.

Lastly, the orientation of the C-Line with respect to fault strike influences the distribution of slip at the fault crossing. Where the C-Line crosses the Berkeley Hills Tunnel and the CCSZ, the faults cross the tracks in a nearly orthogonal orientation, and thus the width over which the tracks cross the fault zone approximates the fault zone width. However, the orientation between the C-Line and the Concord fault is oblique (about 12° to 15°), resulting in an apparent crossing width that is substantially wider than the true width of the fault zone. In our analysis of this crossing, we estimate the distribution of coseismic slip across the full apparent width of the fault zone that is crossed by the C-Line tracks.

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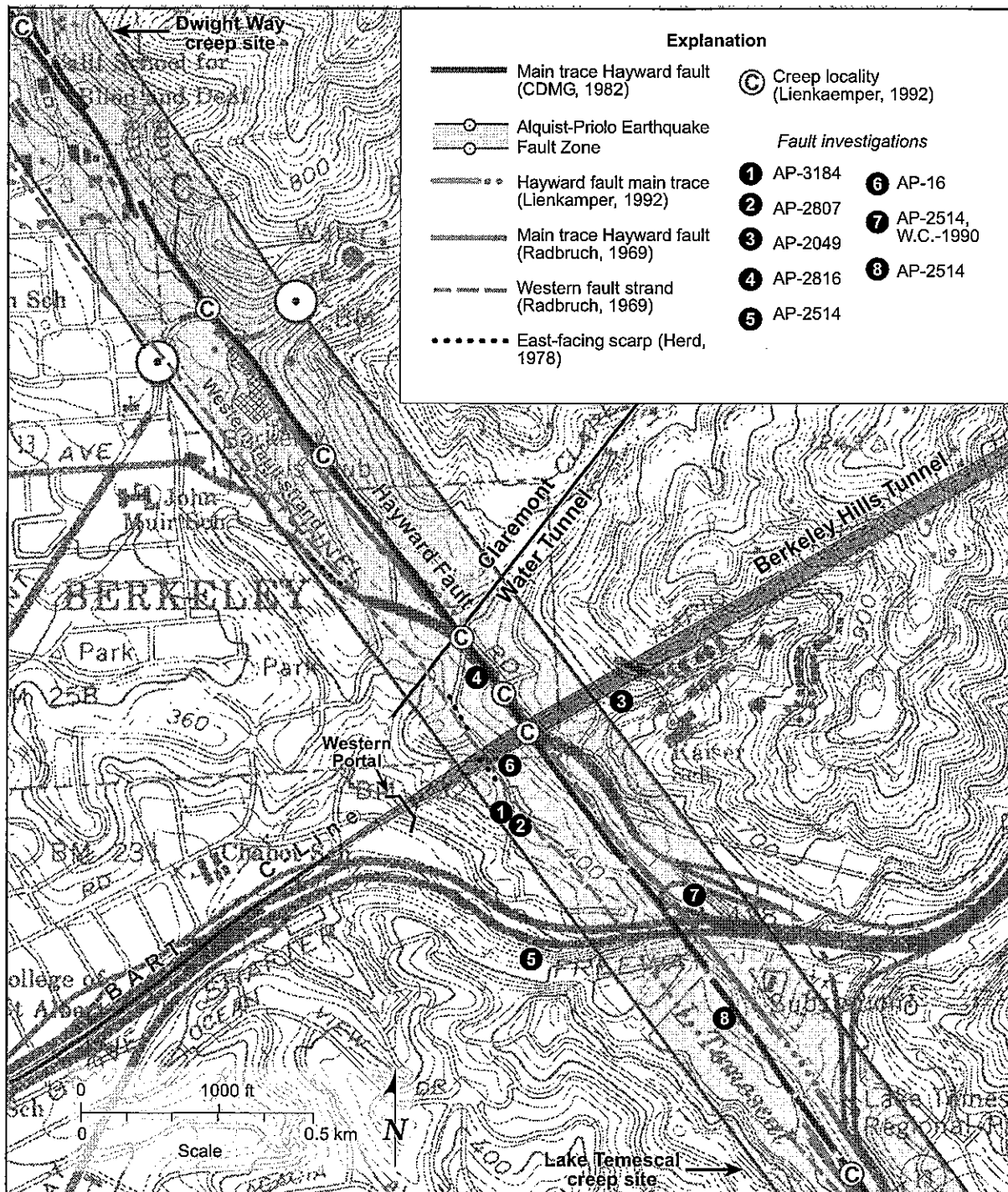
3.0 EXPECTED DISPLACEMENT AT THE C-LINE/HAYWARD FAULT CROSSING

The C-Line crosses the right-lateral Hayward fault at the Berkeley Hills Tunnel (BHT) with a nearly orthogonal geometry about 850 feet east of the western portal (Figure 4). Documented deformation of the tracks and tunnel as a result of active fault creep occurs over a width of at least 100 feet near Mile Post (MP) 4.84 (approx. C1 station 1200+30 to 1201+30). Recent assessment of the fault crossing for the BART Systemwide Seismic Vulnerability Study judged that the BHT could experience approximately 10 ft of right-lateral offset and approximately 2 ft of vertical displacement during the Design Basis Earthquake (DBE) on the Hayward fault (Bechtel/HNTB, 2002). Because of this large expected offset, Bechtel/HNTB (2002) concluded that “no retrofit of the existing tunnels could prevent or minimize the anticipated damage to the tunnels resulting from a rupture of the Hayward fault” (p. 11-1), and recommended that no retrofit be completed. Rather, a post-earthquake repair scheme was developed to minimize the down time on the C-Line and return the existing tunnels first to partial, and then to full, operation. Our analysis refines the analysis developed by Bechtel/HNTB (2002) by considering the effects of fault creep on the expected displacement of the two bores comprising the BHT, and by estimating the likely distribution of displacement within the fault zone. We first summarize relevant characteristics of the Hayward fault, and then estimate the amount and distribution of expected displacement of the BHT.

3.1 Hayward Fault Characteristics

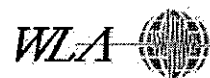
The Hayward fault borders the western margin of the East Bay Hills in the eastern San Francisco Bay area (Figure 1), and has a total length of about 90 km (Lettis, 2001). Recent segmentation models (WGCEP, 1999, 2003; Lettis, 2001) interpret that the fault consists of a 31-km-long northern segment and a 56-km-long southern segment, with a segment boundary at about the Montclair District of Oakland (about 8 km southeast of the BHT). The southern and northern segments overlap one another by approximately 5 to 10 km in the north Oakland-Berkeley area (Lettis, 2001), and because the C-Line is near or within this overlap zone it could experience surface deformation if either or both of the segments rupture in a single earthquake. The WGCEP (2003) analyzed all available local and regional information on the fault, and estimated that there is a 27% probability of a large ($M \geq 6.7$) earthquake somewhere on the Hayward fault between 2002 and 2031. The fault model of the WGCEP (2003) also allows for the possibility of a combined Hayward-Rodgers Creek fault rupture that would have a magnitude as large as $M7.4$, although this earthquake is relatively unlikely. The WG02 model presented by WGCEP (2003) shows that the earthquake having a recurrence of 475 years (i.e., having a 10% probability in 50 years) is $M7.0$, and the

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Figure 4. Local map of the Hayward fault zone near the Berkeley Hills Tunnel, showing primary and secondary mapped traces of the fault, locations of fault creep measurements in Lienkaemper (1992), and locations of previous fault studies completed in the Alquist-Priolo Earthquake Fault Zone. Base map is the USGS Oakland East 7.5-minute topographic map.

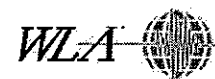


earthquake having a recurrence of 975 years (i.e., having a 5% probability in 50 years) is M7.1. By comparison, the BART Systemwide Seismic Vulnerability Study used a Design Basis Earthquake of M7.25 (Bechtel/HNTB, 2002) for deterministic fault rupture analysis, and the 1000-year return period event for probabilistic fault rupture analysis. However, Bechtel/HNTB (2002) also used a scenario earthquake of M7.0 on the Hayward fault for design considerations.

The rate of “deep” slip (as approximated by the average long-term slip rate) and the rate of aseismic creep on the fault at the ground surface are critical data needed for estimating expected amounts of displacement during a large-magnitude earthquake. A reasonably conservative long-term slip rate on the Hayward fault is 9 mm/yr (WGCEP, 1999; 2003). This estimate is based on a Holocene slip rate of 7 to 10 mm/yr at the Masonic Home near Union City (Lienkaemper et al., 1989; Lienkaemper and Borchardt, 1996) and of 10 ± 1 mm/yr at Strawberry Canyon in Berkeley (P. Williams, in Hirschfeld et al., 1999). The WGCEP (1999, 2003) estimate of 9 ± 2 mm/yr brackets the geologic uncertainty in long-term fault slip rate and represents an approximate 95% confidence interval. The Hayward fault is creeping at the surface along its entire mapped onshore length (Lienkaemper et al., 1991; Lienkaemper and Galehouse, 1997, 1998, Galehouse and Lienkaemper, 2003), although the rate of creep varies along the fault trace. The creep rate averages about 3.5 to 6.5 mm/yr, with a high of 9 mm/yr locally near Fremont (Galehouse and Lienkaemper, 2003). As explained in more detail below, we estimate the average creep rate at the BHT to be 3.5 ± 0.5 mm/yr.

The Hayward fault generated the M6.8 1868 Hayward earthquake, which produced about 30 km of surface rupture between Fremont and San Leandro (Bakun, 1999; Lawson, 1908). The maximum surface offset produced by this rupture is reported to be about 0.9 m (3 ft) (Lawson, 1908). Yu and Segall (1996) analyzed historical triangulation survey data from before and after the 1868 Hayward earthquake to estimate the amount of fault displacement at depth on the Hayward fault. These workers estimated that the average slip on the fault at depth for the 1868 earthquake was 1.9 ± 0.4 m. Yu and Segall (1996) also interpreted a subsurface rupture length of 56 km from the triangulation data, considerably longer than the 30 km of reported surface breakage (Lawson, 1908). This analysis provides an historical benchmark for evaluating the expected amount of surface displacement of the BHT during a large earthquake on the Hayward fault.

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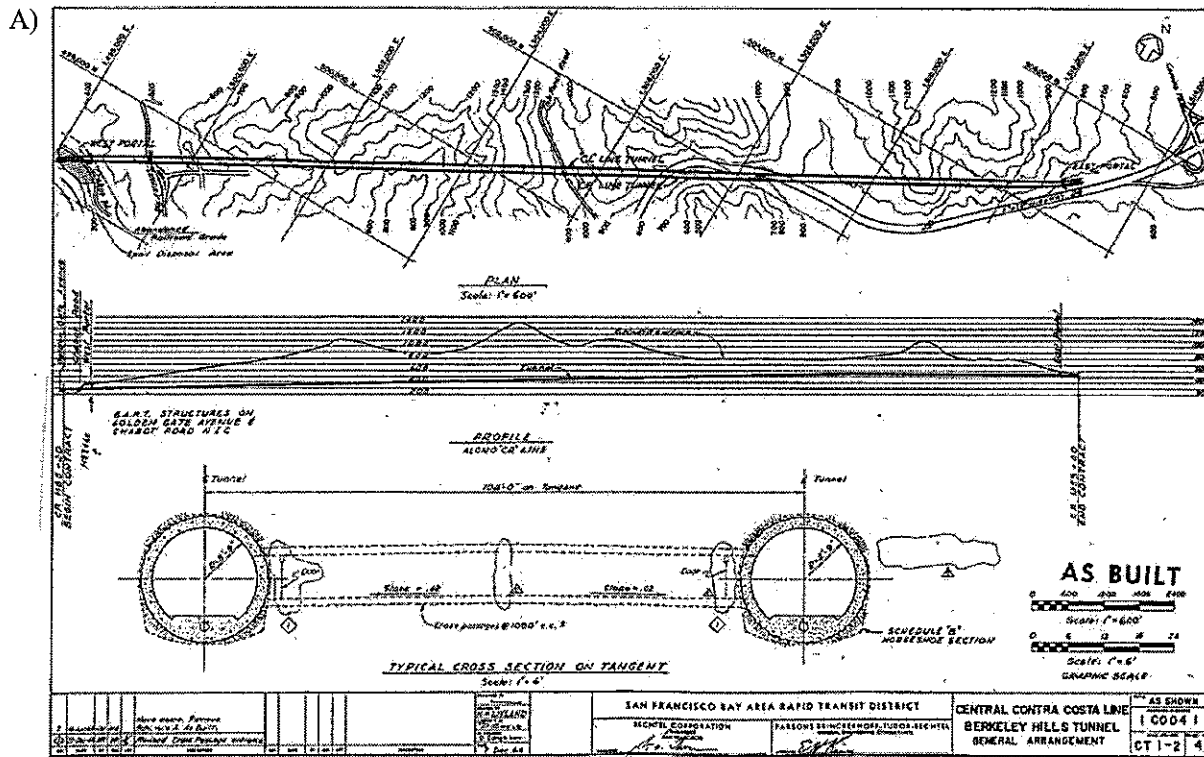
3.2 Site Characteristics of the Berkeley Hills Tunnel/Hayward Fault Crossing

The 3.2-mile long BHT consists of twin, parallel, bored-through-rock tunnels from MP 4.66 to MP 7.84, between the Rockridge Station in Oakland and the Orinda Station (Bechtel/HNTB, 2002). The horseshoe-shaped, concrete-lined tunnels have inside diameters of 17.5 ft and are about 100 feet apart (Figure 5). Both tunnels cross the main Hayward fault zone approximately 850 ft from the western tunnel portal in Oakland, and at a depth of about 170 ft below the ground surface (Figure 5). Tunnel construction through the fault zone is summarized by Bechtel (1968) and Ayres (1969), and later by Rogers (2001), but with some incorrect stationing data. McCutchen and Snyder (1977) describe tunnel instrumentation results and note the presence of two distinct fault strands. Collectively, these studies suggest the fault zone extends from about C1 stationing 1197+00 to 1206+30. The angle between the N60°E tunnel alignment and the N38°W primary fault zone is about 98°. The geometry of this crossing suggests that movement along the Hayward fault offsets the tunnels in a right-lateral direction with a small component of extension.

3.2.1 Measurements of Active Fault Creep in the BHT

Evidence of fault creep provides excellent information on the location of active fault strands. A common assumption is that the primary surface rupture during a large earthquake will coincide with the active creeping fault trace, although fault rupture may also occur on non-creeping fault strands. To evaluate the location and rate of active fault creep, BART has carried out careful alignment surveys of the tunnels since their completion in 1968 (Brown et al., 1981; H. Tafadoghi, BART Maintenance, personal communication, 2005). The surveys provide detailed data on the location and width of active creep along the Hayward fault in the tunnel. Surveys of the south bore (the C1 track or CR Line) provide well-constrained data sets because the tunnel was constructed straight across the fault zone (the north bore has a slight curve at its western end). Bechtel (1970) noted fault creep within a 600-ft-wide zone between C1 stations 1198+00 and 1204+00 (MP 4.79 and 4.90), and McCutchen and Snyder (1977) interpreted active faulting at C1 station 1202+40 (MP 4.88) based on rock movement indicators and pressure cell data. The most comprehensive analysis of fault creep was by Brown et al. (1981), who analyzed several survey data sets and interpreted fault creep between C1 stations 1200+30 and 1201+30 (about MP 4.84), as well as a change in the pattern of cracks in the tunnel liner and a shift in the tracks at station 1200+80 (MP 4.845). In 1985, BART installed a series of monuments in the south bore between stations 1199+00 and 1202+00, and detailed surveys of this alignment in 1990, 1993, and 1999 show substantial right-lateral creep between about 1199+50 and 1201+50 (H. Tafadoghi, BART Maintenance, personal communication,

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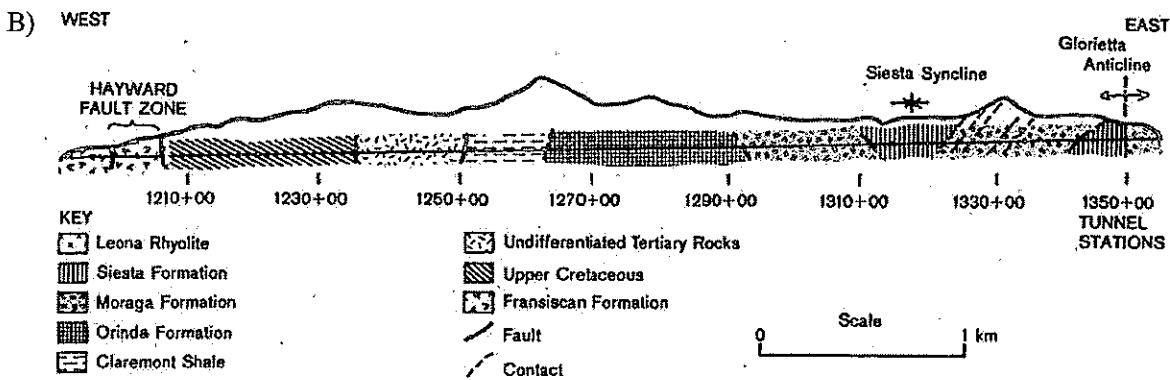
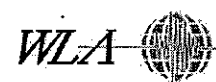


Figure 5. A) As-built drawing of the Berkeley Hills Tunnel, showing topography above tunnel, topographic profile, and typical structural cross section (Bechtel, 1968). B) Generalized geologic section through the Berkeley Hills (Bechtel, 1968; Brown et al., 1981).



2005). In summary, surveys of the BART south bore indicate that the primary zone of active fault creep in the south bore is approximately between stations 1200+50 and 1201+00 (MP 4.84 and 4.85), which coincides with the primary fault trace mapped at the surface.

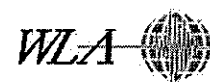
The most recent compilation of creep rates along the Hayward fault is by Galehouse and Lienkaemper (2003), who note that the BHT yields a creep rate of 3.4 ± 0.2 mm/yr (95% confidence). However, nearby sites show slightly higher rates, suggesting that the BHT measurement array may not span the entire zone of fault creep. About 0.3 km north of the BHT, the Claremont Tunnel yields a creep rate of 4.5 ± 1.0 mm/yr, and about 2.4 km north of the BHT, offset of Dwight Way yields a rate of 4.0 ± 2.0 mm/yr (Lienkaemper and Galehouse, 1997) (Figure 4). About 0.6 km south of the BHT, the fault creeps at a rate of 4.1 ± 0.3 mm/yr (at Lake Temescal, Lienkaemper et al., 2001), and about 3.6 km south of the BHT, the fault creeps at a rate of 3.8 ± 0.2 mm/yr (at LaSalle Drive, Galehouse and Lienkaemper, 2003). To acknowledge possible uncertainties in the local and regional creep data, and possible changes in the rate of creep through time, we use all these observations to estimate that the average creep rate at the BHT is 3.5 ± 0.5 mm/yr (95% confidence).

3.2.2 Surface Geologic Relations Near the BHT

The BHT western portal is developed in sandstone within Franciscan mélange (Radbruch, 1969; Crane, 1988a; Graymer et al., 1994) (Figure 5). Above the tunnel, existing surface-geologic mapping shows the presence of serpentine and volcanic rhyolite within the Hayward fault zone, Cretaceous sandstone and shale in the area between the Hayward fault zone and the Wildcat fault zone, and then Tertiary mudstone, shale, and sandstone east of the Wildcat fault to the eastern tunnel portal (Radbruch, 1969; Crane, 1988a; Graymer et al., 1994).

The primary evidence for the mapped locations of strands of the Hayward fault at the BHT comes from general topographic relations, observations of active fault creep, and exposures provided by the two bores of the BHT. Radbruch (1969) mapped the Hayward fault as consisting of two strands in the vicinity of the BHT, including a primary strand generally along Tunnel Road between Highway 24 and the Claremont Water Tunnel, and a secondary strand about 500 ft (150 m) west of the primary strand. Both of these strands were included on the initial 1974 fault map by the State of California as part of the Alquist-Priolo (AP) Act (CDMG, 1974). Herd (1978) noted the presence of east-facing scarps along the western strand, which is associated with topographic benches directly southwest of Roble Road and essentially above the BHT (Figure 4). CDMG (1982) revised the AP fault map and included only one

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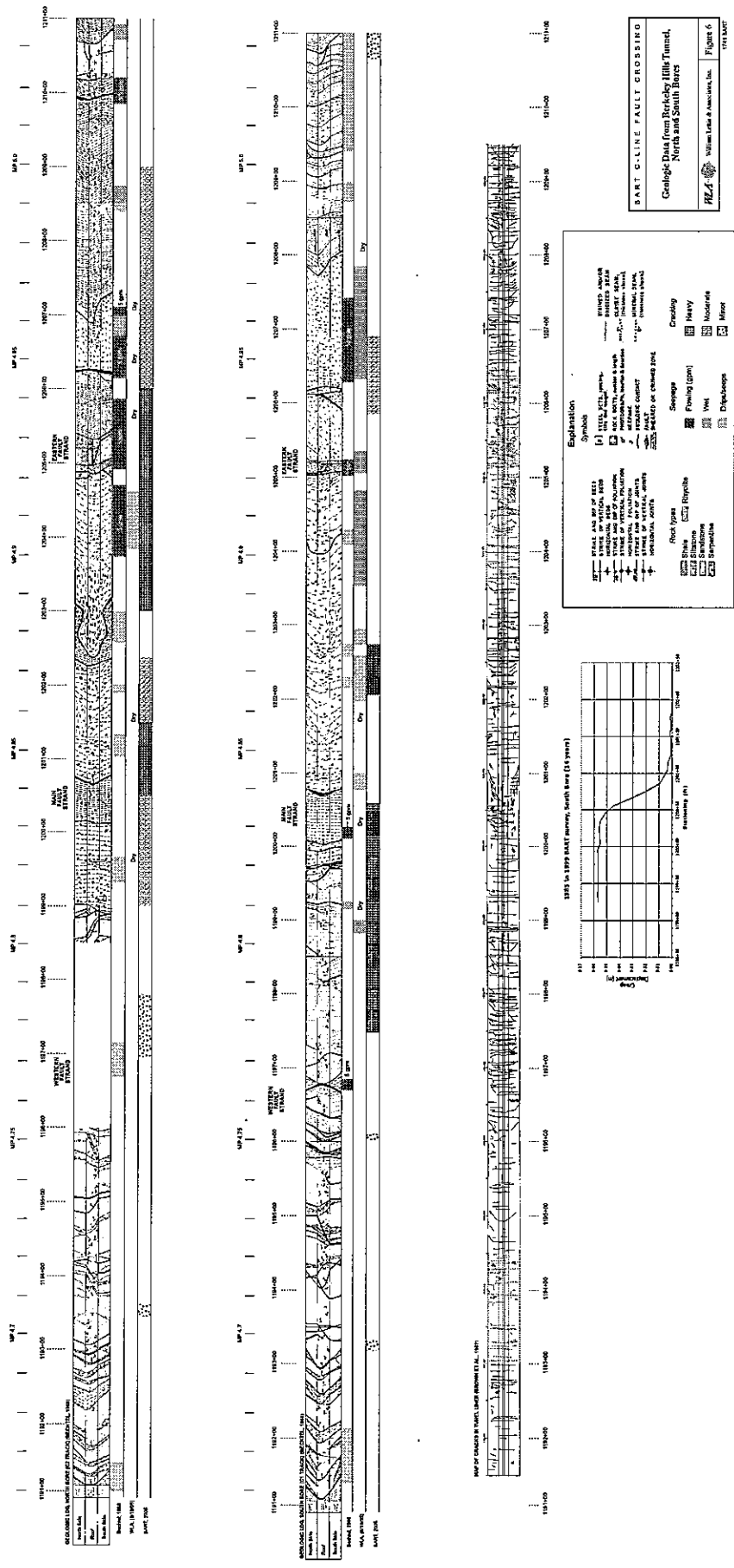
primary fault strand, based on the interpretation that the scarps noted by Herd (1978) are related to an ancient drainage system (Smith, 1980). No exploratory trench has evaluated directly either the western or primary fault strands near the BHT, in part because the area along the Hayward fault was almost entirely developed prior to the AP Act. There is no documented evidence of fault creep along the western fault strand at the ground surface. The primary fault strand, however, is characterized by active creep, as evidenced by offset of the Claremont Water Tunnel (about 0.3 km northwest of the BHT), *en echelon* cracks in Tunnel Road above the BHT (Lienkaemper, 1992; Alan Kropp and Associates, Inc. 1992), and deformation of the BHT (see section below). Evidence of active fault creep also lies along the primary fault strand at Lake Temescal, about 0.6 km southeast of the BHT (Lienkaemper, 1992) (Figure 4). Thus, geologic and geomorphic relations suggest the presence of a fault zone about 150 m (500 ft) wide at the ground surface above the BHT, although only the fault strand beneath Tunnel Road, which is considered to be the primary fault strand, has definitive evidence of fault creep.

3.2.3 Geologic Relations Exposed in the Berkeley Hills Tunnel

The geologic relations exposed in the BHT, based on detailed logs completed during construction (Bechtel, 1968), are consistent with the general geologic relations at the ground surface. In general, both bores encountered Franciscan sandstone from the western portal to a major fault contact with serpentine at about MP 4.81 (Figure 6). Within the Franciscan sandstone, the tunnel logs show a substantial shear zone and fault gouge at about MP 4.76 ("western fault strand", Figure 6). Sheared serpentine and fault gouge are present in both tunnels from about MP 4.81 to about MP 4.92, a distance of about 550 ft (168 m) that includes the primary (creeping) fault strand (Figure 6). The tunnels then encountered rhyolite from a fault strand at about MP 4.92 to about MP 4.97, where the rhyolite is in fault contact with Cretaceous sandstone and shale. From the western portal to the fault contact at MP 4.97, all rock units are either fractured or sheared. East of MP 4.97, the sandstone and shale in both tunnels is relatively unfaulted (Bechtel, 1968). Thus, the tunnel geologic logs indicate the presence of a broad zone of major faulting from about MP 4.81 to MP 4.92, as well as other major faults at about MP 4.77 and MP 4.97 (Figure 6). For reference, the primary fault trace of Radbruch (1969), Smith (1980), CDMG (1982), and Lienkaemper (1992) projects downward to the BHT at about MP 4.84, and the western fault strand of Radbruch (1969) projects downward to about MP 4.76.

The zone of fault creep in the BHT lies within the primary fault zone between about MP 4.81 to MP 4.92 identified in the tunnel geologic logs (Bechtel, 1968). Survey data between MP 4.81 and 4.87 presented by Lienkaemper and Galehouse (1997) show that substantial creep occurs at about MP 4.84. Tunnel

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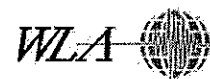


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Figure 7. Photograph of cracks in the south wall of the south bore, C1 station 1201+00. Photograph taken August 19, 2005.

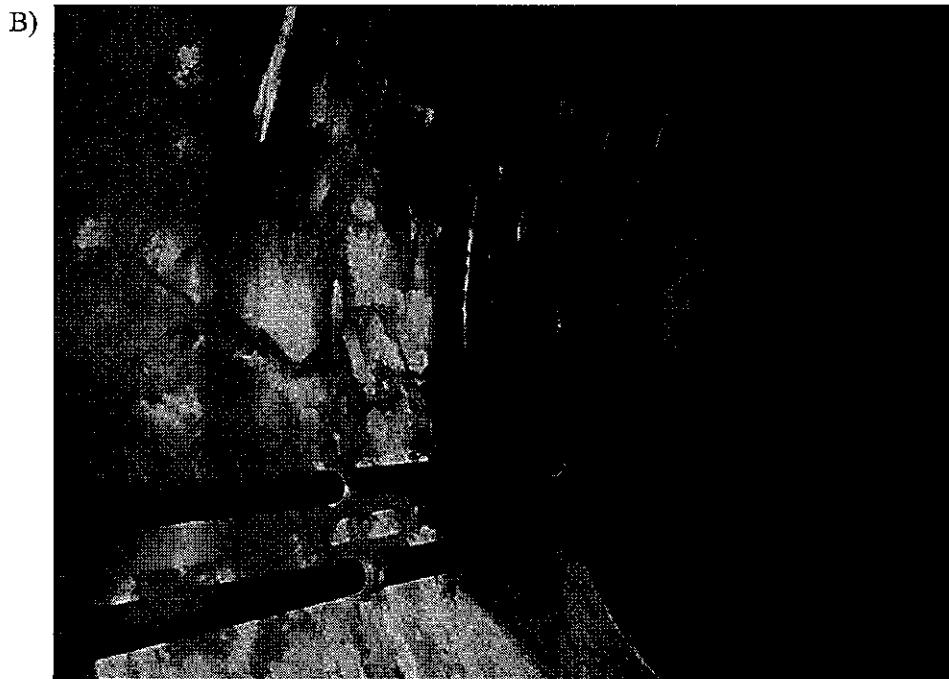
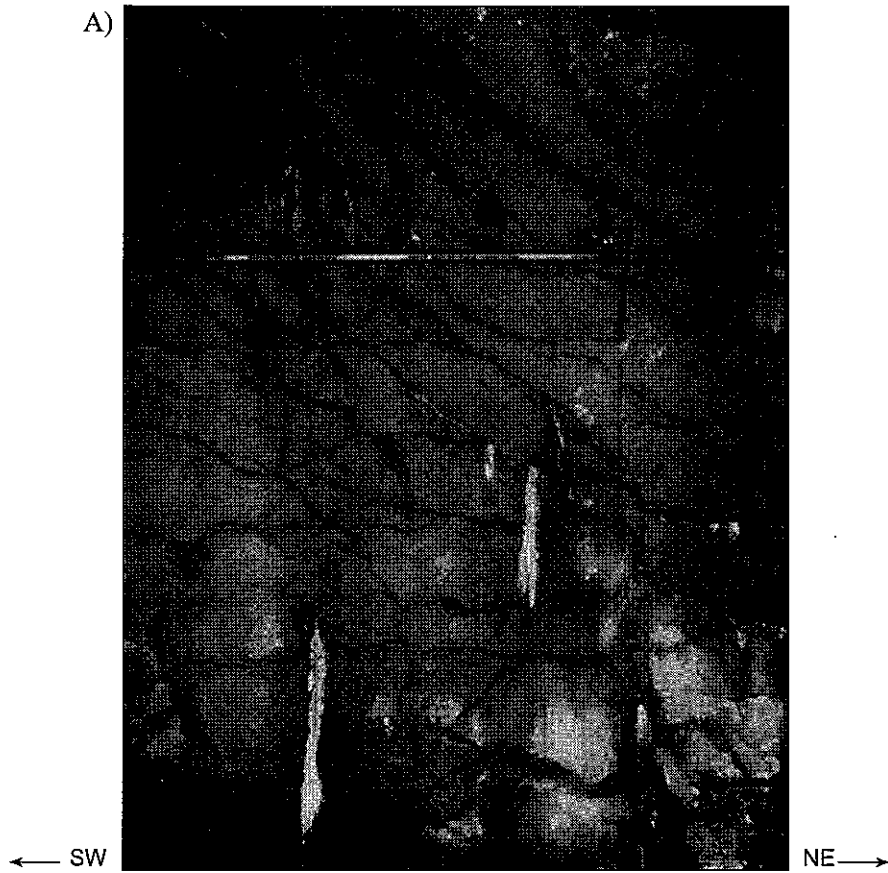


inspections routinely completed by BART personnel since 1986 (summarized in BART, 2005) indicate that the tunnel lining in this area contains moderate to heavy cracking and has spalled locally (Figure 6). Seepage also is substantial in this zone, which was confirmed during our tunnel reconnaissance on August 19, 2005. Our observations of the C1 tunnel walls showed the area near MP 4.83 to 4.85 to contain abundant cracks (Figure 7), most of which are fresh and are not filled with mineral precipitates from groundwater inflow. This deformation coincides with the location (about MP 4.84) where survey monuments are offset the greatest amount, and thus includes the primary, actively creeping Hayward fault zone. In the north bore, BART (2005) reports moderate cracking and seepage from MP 4.81 to 4.86, spanning the fault zone (Figure 6). Our observations of the C2 tunnel walls on August 19, 2005 showed abundant east-dipping fractures and moderate seepage from fresh-looking cracks in this part of the tunnel (Figure 8). The observation of open cracks and mineral infillings in the concrete lining of the tunnel provides geologic evidence that right-lateral offset of the N60°E-trending tunnel by the N38W-striking Hayward fault causes slight extensional strain in the tunnel, as suggested by the obtuse (98°) angle between the BHT and the fault.

Geologic observations within the tunnel show that the entire Hayward fault zone is much wider than the zone identified as having present-day creep (Figure 6). As noted above, the south bore encountered fractured Franciscan sandstone from the western portal (MP 4.664) to a fault contact with serpentine at about MP 4.81. Bechtel (1968) notes substantial shearing and gouge zones within the sandstone from MP 4.75 to 4.77. During the eastward-progressing construction of the tunnel, the first substantial inflow of groundwater (about 5 gpm) was encountered at this gouge zone within the Franciscan sandstone (Figure 6). Bechtel (1968) measured a fault dip of 60°W on this western fault zone, which projects upward to the western strand of Radbruch (1969) at the ground surface. Recent tunnel inspections by BART (2005) depict cracking in the south bore at about C1 station 1196+28 (MP 4.755), starting in March, 2003, which suggests that tunnel deformation at this location is ongoing, rather than a temporary response following tunnel construction. Based on these conditions, we interpret that the western fault strand in the BHT (Figure 6) is correlative with the western strand mapped at the surface by Radbruch (1969) (Figure 4). The survey monuments used for measuring creep do not cross this fault, and thus do not address the presence or absence of creep across the western fault strand.

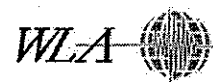
Importantly, cracking of and seepage from the tunnel walls also is present east of the primary creeping fault zone (Figure 6). In general, zones of abundant cracking and seepage coincide with eastern fault zones documented in the Bechtel (1968) geologic logs and acknowledged by Ayres (1969). For example,

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Figure 8. Photographs of cracks in north bore wall, C2 station 1205+00. Both photos of north wall, showing east-dipping fractures developed in liner and mineral precipitates derived from cracks. Photographs taken August 19, 2005.



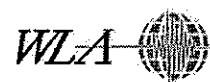
both tunnels contain a fault zone at about MP 4.92 (C1 station 1205+10, C2 station 1204+85), which forms the contact between serpentine on the west and rhyolite on the east (Bechtel, 1968). This vertical, N40°W-striking fault zone is 6 to 15 m (20 to 50 ft) wide, contains blue-gray gouge in the serpentine and brown-black gouge in the rhyolite, and is associated with seepage at a rate of 5 to 14 gpm. BART inspection reports (BART, 2005) note moderate cracking across the C2 tunnel at MP 4.915 (C2 station 1204+55), which was first identified in March 2005, and MP 4.924 (C2 station 1205+03), which was first identified in March 2000. Our observations on August 19, 2005 indicate the presence of many cracks in the tunnel liner and substantial seepage in this area (Figure 8). Many of the cracks are filled with mineral precipitate, although some are fresh and represent recent deformation. Detailed alignment surveys to measure fault creep have not extended across this fault zone. We interpret that this eastern fault strand may be an active structure based on the juxtaposition of substantially different rock units, presence of tunnel deformation, and continued water seepage.

Therefore, geologic observations within and above the BHT suggest that the tunnels cross the main strand of the Hayward fault at about MP 4.82 to MP 4.85 (approx. station 1199+50 to 1201+50), with active fault creep deformation occurring over an 100-ft-wide zone between MP 4.83 and MP 4.85 (C1 station 1200+30 and 1201+30; Lienkaemper and Galehouse, 1997). Geologic tunnel logs support the presence of a western fault strand at about MP 4.76 and an eastern strand at about MP 4.92, and demonstrate that the Hayward fault zone in the BHT extends from about MP 4.75 (C1 station 1195+70) to about MP 4.93 (C1 station 1205+50). Thus, the BHT crosses the Hayward fault zone over a distance that is as much as about 980 ft (300 m) wide, including a primary strand at about MP 4.84 (C1 station 1200+75) and secondary fault strands at about MP 4.75 and MP 4.92 (C1 station 1195+70 and 1205+10).

3.3 Expected Amount of Surface Fault Displacement at the Berkeley Hills Tunnel

Aside from limited observations following the 1868 Hayward earthquake, there is little definitive information on the amount of coseismic slip that occurs during large-magnitude earthquakes on the Hayward fault. Lawson (1908) reported a maximum right-lateral surface displacement of about 0.9 m produced by the 1868 earthquake, which ruptured the southern section of the Hayward fault. Although recent paleoseismic studies on the southern fault section have documented the occurrence of several ruptures within the past approximately 2,000 years (Lienkaemper et al., 2002), there are no direct measurements of prehistoric coseismic displacement along the Hayward fault.

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Nevertheless, estimates of potential surface rupture displacements on the Hayward fault have been made. Based on the assumption of an elastic rebound model, Lienkaemper et al. (1991) estimated fault rupture of about 1.1 m (3.6 ft) at depths below the creeping zone, and a maximum slip of 0.8 m (2.6 ft) at the ground surface during a **M6.8** scenario earthquake. In addition, these workers estimated an average surface slip of 0.4 m (1.3 ft) along the southern fault segment. Analysis of 19th-century triangulation data by Yu and Segall (1996) suggests that subsurface slip averaged 1.9 ± 0.4 m (6.2 ± 1.3 ft) during the 1868 earthquake. WGCEP (1999) used this estimate for the amount of coseismic slip on the Hayward fault, assuming that the 1868 earthquake is the characteristic event for either the northern or southern segments of the fault. This suggests that the deep slip of about 1.9 m (6.2 ft) noted by Yu and Segall (1996) attenuated toward the ground surface in 1868, and that the observed length and amount of surface slip may be significantly less than the length and amount of subsurface slip. The apparent attenuation of slip toward the ground surface is consistent with the hypothesis that the Hayward fault was creeping during the seismic cycle culminating with the 1868 earthquake. Estimates of coseismic displacement for the BHT must take into account these historic observations and rupture models.

For the purposes of this evaluation, we consider scenario earthquakes on the Hayward fault with return periods of 150 and 475 years (Table 1). The 150-year event has a magnitude of **M6.8**, which represents an event similar to the 1868 Hayward earthquake (Yu and Segall, 1996). As explained in Section 2.1, the 475-year event has a magnitude between approximately **M7.0** and **M7.2**, a range that is based on WG02 frequency-magnitude relationships (WGCEP, 2003). The **M7.0** event accounts for creep that may be occurring in the seismogenic crust, whereas the **M7.2** event represents a 475-year earthquake based on our re-calculation of the WG02 frequency-magnitude relationships to remove the effects of fault creep. An earthquake with a return period of 475 years has 10% chance of occurring within 50 years.

In order to quantify the effect of fault creep on the amount of surface fault rupture, we compared the rate of fault creep with the rate of long-term geologic slip, and adjust the expected amount of surface displacement accordingly. As noted in Section 3.1, the rate of fault creep on the Hayward fault in the vicinity of the BHT is 3.5 ± 0.5 mm/yr, and the long-term geologic slip rate is 9 ± 2 mm/yr. These data suggest a near-surface slip accumulation ratio (R_s) of 0.61 ± 0.27 (see Equation [1] in Section 2.2 above). We use this R_s value in Equation [3] to estimate the expected amount of surface displacement at the BHT, following the approach outlined in Section 2.0, as summarized in Table 3. Results from the two estimates of the 475-year event are averaged to produce the displacement curve for the 475-year scenario earthquake. Displacement curves for the 150-year (**M6.8**) and 475-year (**M7.0** to **M7.2**) scenario

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earthquakes are portrayed as cumulative probability plots on Figure 9. This analysis indicates that, given the M6.8 scenario earthquake, the expected median (50% cumulative probability) displacement on the creeping Hayward fault at the BHT is 1.8 ft (0.5 m), and the 84% (1 standard deviation) and 97.5% (2 standard deviations) cumulative probabilities are 3.4 ft (1.0 m) and 6.5 ft (2.0 m), respectively (Table 3). These values are consistent with observations and modeling of the 1868 surface rupture (Lawson, 1908; Yu and Segall, 1996; Lienkaemper et al., 1991). The expected displacements during the 475-year scenario earthquake are also shown on Table 3. These displacements will be distributed across the entire fault zone, as described in Section 3.4 below.

Table 3. Expected Fault Displacements (in feet) at the Berkeley Hills Tunnel from Scenario Earthquakes on the Hayward Fault, for Selected Cumulative Probabilities.

Return Period	Scenario Earthquake	Cumulative Probability				
		2.5%	16%	50%	84%	97.5%
150 yr	M6.8	0.5 ft	0.9 ft	1.8 ft	3.4 ft	6.5 ft
475 yr	M7.0	0.7 ft	1.4 ft	2.7 ft	5.2 ft	9.9 ft
475 yr	M7.2	<u>1.1 ft</u>	<u>2.1 ft</u>	<u>3.9 ft</u>	<u>7.8 ft</u>	<u>14.8 ft</u>
	<i>Average:</i>	0.9 ft	1.8 ft	3.3 ft	6.5 ft	12.4 ft

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3.4 Expected Distribution of Fault Displacement at the Berkeley Hills Tunnel

As summarized in Section 3.2.3 above, logs of the BHT walls suggest that the entire fault zone is about 980 ft wide (Figure 6). Based on the tunnel logs and our observations, we construct an interpretive transect across the fault zone showing the inferred distribution of lateral slip across the fault zone at this site, as a percentage of the total expected displacement (Figure 10). This plot shows the percentage of total displacement that is expected to occur within individual, 20-ft-wide bins across the fault zone. We interpret that displacement will occur across the three fault zones identified in the tunnel (Figure 6). This interpreted distribution is based on the relative width and character of shears documented on the tunnel logs, as summarized below.

Across the primary fault strand, we interpret that slightly more than half of the total lateral offset will occur within the 100-ft-wide fault zone between C1 stations 1200+30 and 1201+30 (Figure 6). This section is characterized by well-developed fault gouge within sheared serpentine bedrock, substantial

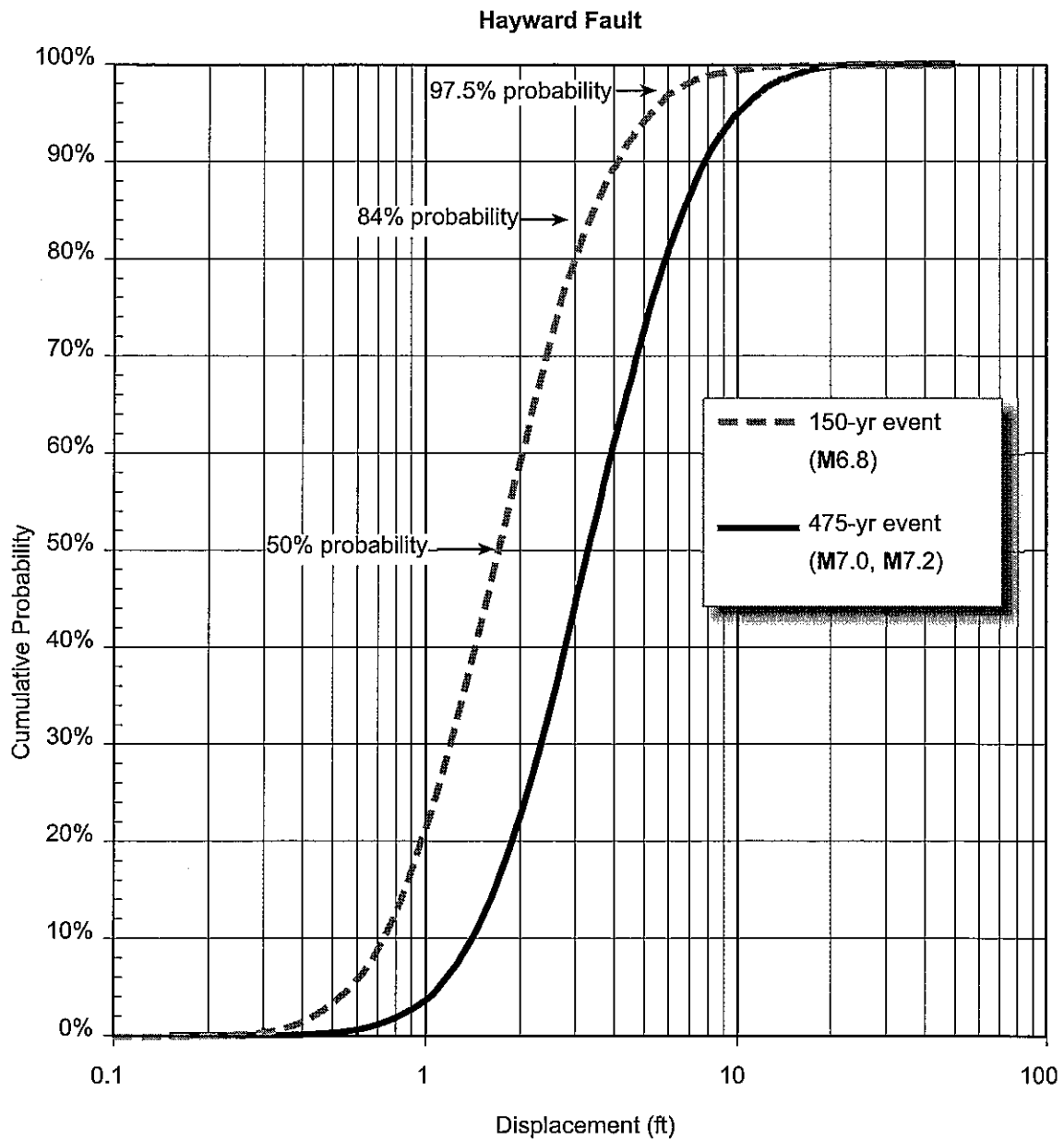
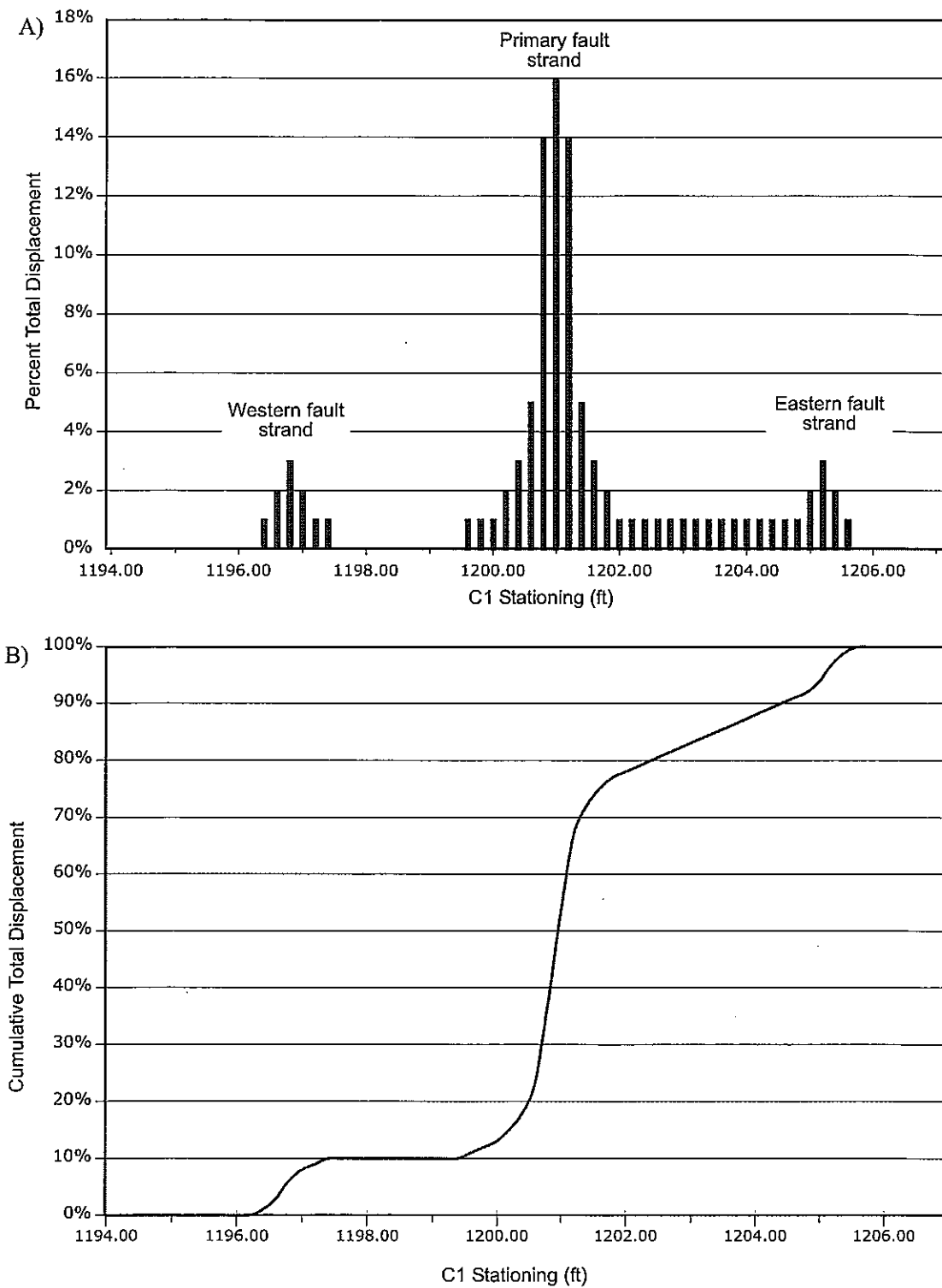


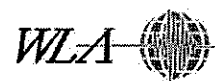
Figure 9. Cumulative probability versus displacement curves for the 150-year and 475-year scenario earthquakes on the Hayward fault at the BHT. Displacement values at 50%, 84%, and 97.5% probability, indicated by arrows, are included in Table 3.

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Figure 10. (A) Histogram showing percentage of total expected displacement along the C-Line where it crosses the Hayward fault in the Berkeley Hills Tunnel, (B) Cumulative percent plot of total expected displacement across the Hayward fault zone in the Berkeley Hills Tunnel.



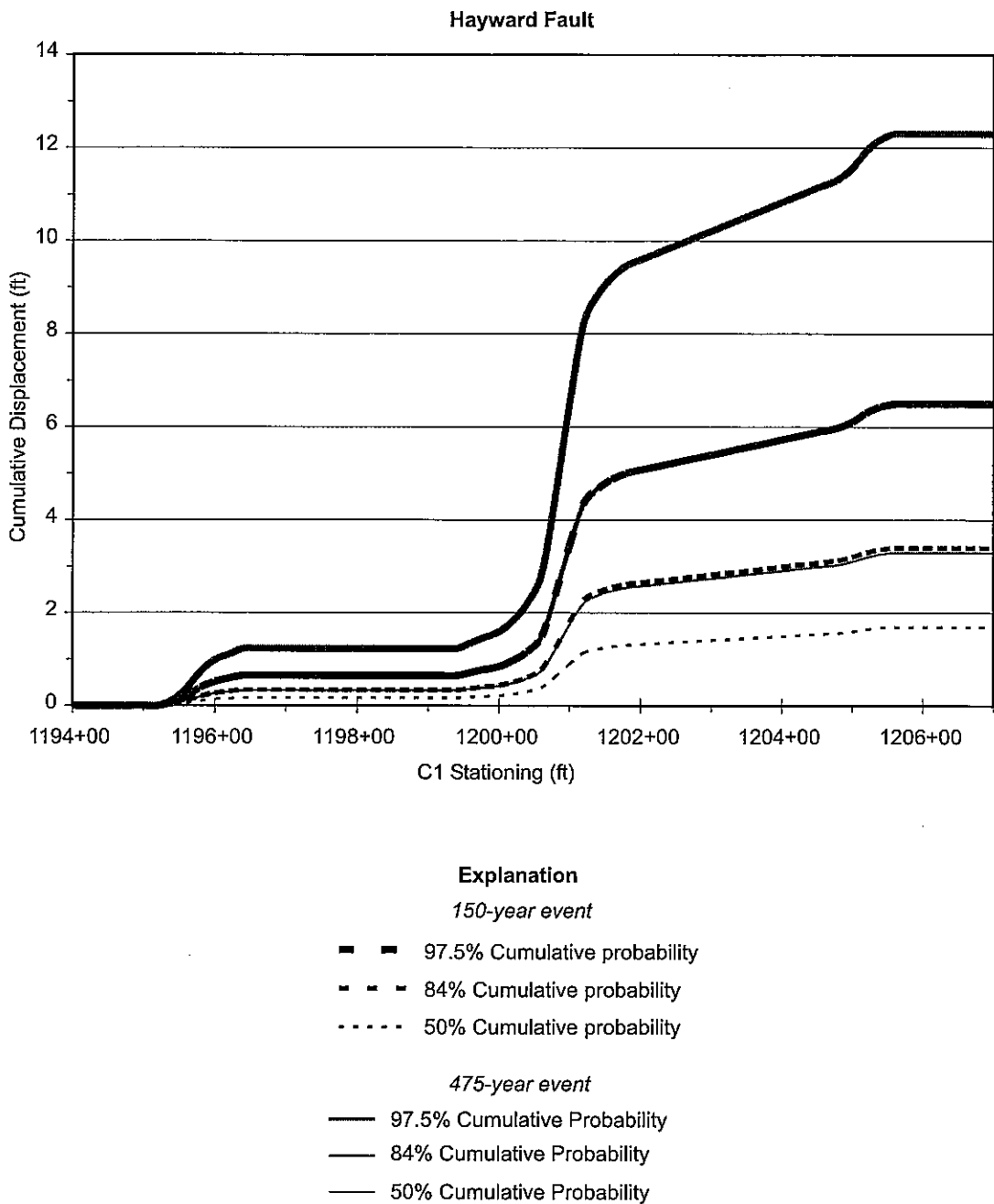
water seepage, the deformed concrete tunnel liner, and active fault creep (Figure 6). We interpret that there will be some secondary fault offset or drag folding adjacent to the main trace, as suggested by the width and degree of bedrock deformation documented in the BHT geologic logs. The presence of sheared serpentine in the fault zone suggests that lateral displacement likely will be accommodated throughout this zone during a large magnitude earthquake. We estimate that about 75% of the total offset will occur in the sheared serpentine between about MP 4.83 and MP 4.87 (C1 stations 1200+00 and 1202+00).

As noted in Section 3.2.3, the zone of geologic deformation also includes a secondary fault at C1 station 1205+10 (about MP 4.92), representing the contact between serpentine and sheared rhyolite (Figure 6). This fault may accommodate some displacement during the scenario earthquakes; we interpret that as much as about 8% of the total slip will occur within the 80-ft-wide fault zone between C1 stations 1204+80 and 1205+60 (about MP 4.92 to 4.94, Figure 10). We allow for some minor slip to occur in the serpentine bedrock between the main fault zone at C1 station 1201+45 (MP 4.86) and this secondary eastern fault at C1 station 1205+10 (MP 4.93) (Figure 10).

Also, geologic evidence from the tunnel shows the presence of a western fault strand at about MP 4.76 (C1 station 1196+70) (Figure 6). Because this fault probably projects upward to the western fault strand mapped at the surface on the basis of geomorphology (Radbruch, 1969; Herd, 1978), we consider it likely that some slip may occur on this feature in the BHT. In addition, the presence of prominent shearing, fault gouge, and water seepage at this fault strand suggest that some displacement may be accommodated along this structure during a large magnitude earthquake on the Hayward fault. Figure 10 shows the interpretation that approximately 10% of the total slip may occur on the secondary western fault strand.

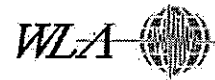
These interpretations are used herein to estimate the amounts of expected displacement across the Hayward fault zone in the BHT. As noted in Section 3.3 above, we expect that the median (50% cumulative probability) surface displacement along the Hayward fault at the BHT, as a result of the 475-yr scenario earthquake, will be about 3.3 ft (1.0 m). The 84% (1 standard deviation) and 97.5% (2 standard deviations) cumulative probabilities are 6.5 ft (2.0 m) and 12.4 ft (3.8 m), respectively (Table 3). Based on the interpreted percentages of slip across the fault zone (Figure 10) and the estimated amount of total displacement at the BHT from the scenario earthquake, the cumulative distribution of slip can be defined. Figure 11 shows the distributions of slip for the 50%, 84% and 97.5% cumulative probability levels for the 150-yr (M6.8) and 475-yr (M7.0 to M7.2) scenario earthquakes.

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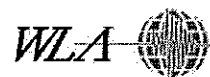
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Figure 11. Plot of cumulative displacement across the Hayward fault in the BHT, for cumulative probabilities of 50%, 84%, and 97.5% for the 150-yr and 475-yr scenario earthquakes.



The amounts of coseismic vertical displacement that have occurred near the BHT during large earthquakes on the Hayward fault are not known. However, the presence of the uplifted Berkeley Hills suggests that any vertical displacement produced during fault movement is likely to be up-on-the-east. For the purposes of this analysis and in the absence of better information, we conservatively estimate that the amount of vertical slip during individual surface ruptures along the Hayward fault is about 10 to 30% of the lateral slip. Thus, we suggest that the amount of vertical displacement along the BART alignment can be roughly estimated by assuming a range of 10 to 30% of the values shown on Figure 11, or as much as about 0.7 to 2.0 ft at the 84% cumulative probability level. The sense of this vertical slip, if it occurs, would most likely be up-on-the-east.

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4.0 EXPECTED DISPLACEMENT AT THE C-LINE/CONTRA COSTA SHEAR ZONE CROSSING

The Contra Costa Shear Zone (CCSZ) is a collection of north-striking, left-stepping *en echelon* faults and fault-related features that extend northwestward from the northern Calaveras fault into the East Bay Hills (Unruh and Kelson, 2002; Kelson et al., 2004a) (Figure 2). In the vicinity of the C-Line, the CCSZ consists of four fault strands: (1) the West Lafayette fault, (2) the Lafayette fault, (3) the Reliez Valley fault, and (4) the Saklan (“Franklin” or “Calaveras”) fault (Figure 12). Recent assessment of the fault crossing for the BART Systemwide Seismic Vulnerability Study (Bechtel/HNTB, 2002) characterized only the eastern fault within this zone, the Saklan fault, which they referred to as the “Calaveras fault”. This previous study estimated that this fault could produce as much as 4.6 ft (1.4 m) of right-lateral fault displacement between Abutment A9 and Bent P10 of the Walnut Creek Aerial Guideway (Bechtel/HNTB, 2002). Bechtel/HNTB (2002) did not address other faults within the CCSZ.

In this analysis, we summarize available data on the location, amount, and width of displacement associated with faults in the CCSZ where they cross the C-Line (Figure 12). Based on review of available data, air-photo interpretation, and field reconnaissance, we refine the analysis developed by Bechtel/HNTB (2002) through consideration of the effects of fault creep on the expected displacement, and of the likely distribution of displacement across each fault in the shear zone and across the entire zone. This section first summarizes relevant characteristics of the CCSZ, presents available data on the location and width of the faults near the C-Line, and then estimates the amount and distribution of expected displacement at each location where the C-Line crosses fault strands in the CCSZ.

4.1 Contra Costa Shear Zone Characteristics

Recent geologic research in the northern East Bay Hills identified a series of north-striking, left-stepping *en echelon* faults and fault-related features that extend northwestward from the northern Calaveras fault near Alamo and into the East Bay Hills toward the Carquinez Strait (Unruh and Kelson, 2002; Kelson et al., 2004a). These faults are collectively referred to as the Contra Costa Shear Zone (CCSZ) (Figure 2). The total length of the CCSZ, as measured along an orientation of N33°W, is approximately 32 km; individual faults within the shear zone range in length from about 5 to 21 km. All of the faults and lineaments within the CCSZ are associated with geomorphic features suggestive of late Quaternary activity, and some are associated with present-day microseismicity (Unruh and Kelson, 2002). Crustal strain appears to be distributed over a broad region of the northern East Bay Hills, and the CCSZ appears

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Figure 12. Map of faults and lineaments within the Contra Costa shear zone near the BART C- line in Lafayette and Walnut Creek (after Unruh & Kelson, 2002). Red lines are known faults or prominent fault-related lineaments; orange lines are probable fault-related lineaments; purple symbols show general bedding strike. Colored map units show surficial deposits: brown = late Pleistocene alluvium; green = Holocene alluvium; yellow = Holocene alluvial fan deposits; pink = Holocene landslide deposits.



to accommodate all, or most, of the 4 to 7 mm/yr of right-lateral slip that continues northwestward from the northern Calaveras fault (Unruh and Kelson, 2002). This report includes the possibility of surface fault rupture along the CCSZ to maintain reasonable conservatism in characterizing fault-rupture hazard along the C-Line.

Faults within the CCSZ are not known to be creeping, although the occurrence of creep cannot be ruled out because the creeping northern Calaveras fault probably continues northwestward into the CCSZ (Unruh and Kelson, 2002). If active creep occurs within the CCSZ, the movement may be distributed on several fault strands. Similarly, coseismic surface rupture along the CCSZ could entail either rupture along an individual fault strand or distributed deformation on several strands within the CCSZ. The character and distribution of possible surface rupture within the CCSZ is not known with certainty; this analysis considers that coseismic slip will be distributed on fault strands within the entire 4-km-wide shear zone. The possibility that independent coseismic rupture would occur along only one of the fault strands within the CCSZ is judged unlikely and is not considered herein.

In the vicinity of the C-Line, the CCSZ includes the previously identified Lafayette and Reliez Valley faults in Lafayette, as well as parts of faults previously mapped as the Franklin fault (Saul, 1973; Bechtel/HNTB, 2002), the Calaveras fault (Dibblee, 1980), the Saklan fault (Woodward-Clyde Consultants, 1979a), and the Larkey lineament (Unruh and Kelson, 2002). The C-Line crosses the 4-km-wide CCSZ between the Lafayette and Walnut Creek train stations, and may cross as many as four potentially active fault strands within the shear zone (Figure 12). As described below (from west to east), the C-Line crosses: (1) the West Lafayette fault, (2) the Lafayette fault, (3) the Reliez Valley fault, and (4) the Saklan (“Franklin” or “Calaveras”) fault (Figure 12).

In general, the locations of the four faults within the CCSZ that cross the C-Line (Figure 12) are all poorly constrained and cross the C-Line corridor with broad zones of uncertainty (Table 4). As described below, there are limited data that constrain the locations of the four individual fault-strand crossings. During a large earthquake along the CCSZ, surface rupture may anywhere occur within these zones of possible deformation, although the deformation may not be distributed throughout any individual zone.

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Table 4. Locations of faults within the CCSZ and widths of zones within which surface rupture may occur.

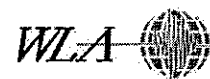
Fault within CCSZ	Zone Within Which Rupture May Occur (Milepost)	Width (ft)
West Lafayette	MP 12.85 to 13.00	800 ft
Lafayette	MP 13.15 to 13.25	530 ft
Reliez Valley	MP 13.50 to 13.60	530 ft
Saklan	MP 14.93 to 15.03	530 ft

4.1.1 West Lafayette Fault

The previously unnamed West Lafayette fault is identified herein on the basis of mapping by Unruh and Kelson (2002), which documented several aligned geomorphic features along a 5-km-long zone north of the C-Line. This zone includes steep, aligned linear valleys oriented across the geologic grain of the East Bay Hills, *en echelon* tonal lineaments across alluvial terraces, saddles, and truncated bedrock ridges. This collection of lineaments is parallel to, but about 0.5 km west of, the Lafayette fault (Figure 12). The north-striking West Lafayette fault merges to the north with the Lafayette fault near Springhill Canyon, about 1.2 km north of the C-Line. To the south, it also merges with the Lafayette fault near northern Burton Valley, about 2 km south of the C-Line. The entire mapped length of this fault is about 5 km, and it probably represents a secondary fault splay of the Lafayette fault. There is no information on the activity or rupture characteristics of this feature, although the presence of the geomorphic features mapped by Unruh and Kelson (2002) suggest that it is potentially active.

The location of the West Lafayette fault at the C-Line is based primarily on the southward projection from a linear valley occupied by Elizabeth Lane in Lafayette, north of Highway 24 and the C-Line (Figure 12). This lineament projects to approximately MP 12.95 along the C-Line. Unruh and Kelson (2002) also identify two series of left-stepping, *en echelon* lineaments in alluvium in the Las Trampas Creek valley to the south of Highway 24; the collective width of these lineaments suggest that the fault zone is perhaps as much as 240 m wide (800 ft; Table 4). Based on our field reconnaissance, the C-Line in this area is at grade, and underlain by engineered fill, native soil, or bedrock.

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4.1.2 Lafayette Fault

The Lafayette fault extends from the vicinity of Las Trampas Creek near St Mary's College north to Briones Regional Park, for a total length of about 13 km (8 mi), including its northernmost section where it merges with the Reliez Valley fault (Unruh and Kelson, 2002). As identified by Dibblee (1980), Crane (1988b) and Graymer et al. (1994), the N15°W-striking fault has predominantly dextral strike slip, and displaces Tertiary sandstone strata. The Lafayette and Reliez Valley faults are subparallel at their southern ends and separated by approximately 250 m to 500 m. The Lafayette fault is associated with strongly pronounced geomorphic features suggestive of possible late Quaternary activity along most of its entire length, including multiple tonal lineaments in alluvium, saddles, linear valley margins, and vegetation alignments (Figure 12). Notably, the fault coincides with a series of large linear troughs directly south and north of the C-Line (Figure 13). The fault location at the C-Line is poorly constrained; it lies within a zone about 160 m wide (530 ft; Table 4) based on a linear projection between these linear troughs to the south and north. Unruh and Kelson (2002) interpret the Lafayette fault as a potentially active fault.

The Lafayette fault, as mapped by Dibblee (1980) and Unruh and Kelson (2002), crosses the C-Line between about MP 13.15 to 13.25 (Table 4), based on projections of linear, fault-related troughs present south and north of the C-Line (Figure 13). Within an area about 400 m (1300 ft) wide centered on the C-Line, there are no constraints on the fault location, and there are no exposures or trench data to further constrain the fault crossing location. Track alignment data show no evidence of right-lateral deformation across the zone within which the Lafayette fault is constrained (M. Brown, BART, personal communication, 2005). In the absence of additional information, we estimate that the Lafayette fault crosses the C-Line between about MP 13.15 and 13.25. Based on our field reconnaissance, the C-Line in this area is at grade, and underlain by engineered fill, native soil, or bedrock.

4.1.3 Reliez Valley Fault

The Reliez Valley fault (Figure 12) extends from the northwestern part of Tice Valley, along Reliez Valley, and into Briones Regional Park where it merges with the Lafayette fault (Dibblee, 1980; Crane, 1988b; Unruh and Kelson, 2002). This north-striking fault is associated with prominent fault-related geomorphic features, including linear valley margins, saddles, side-hill benches, tonal and vegetation lineaments, and linear drainages that cut across the structural grain of the East Bay Hills region (Unruh and Kelson, 2002). Directly south and north of the C-Line, the fault is associated with a series of

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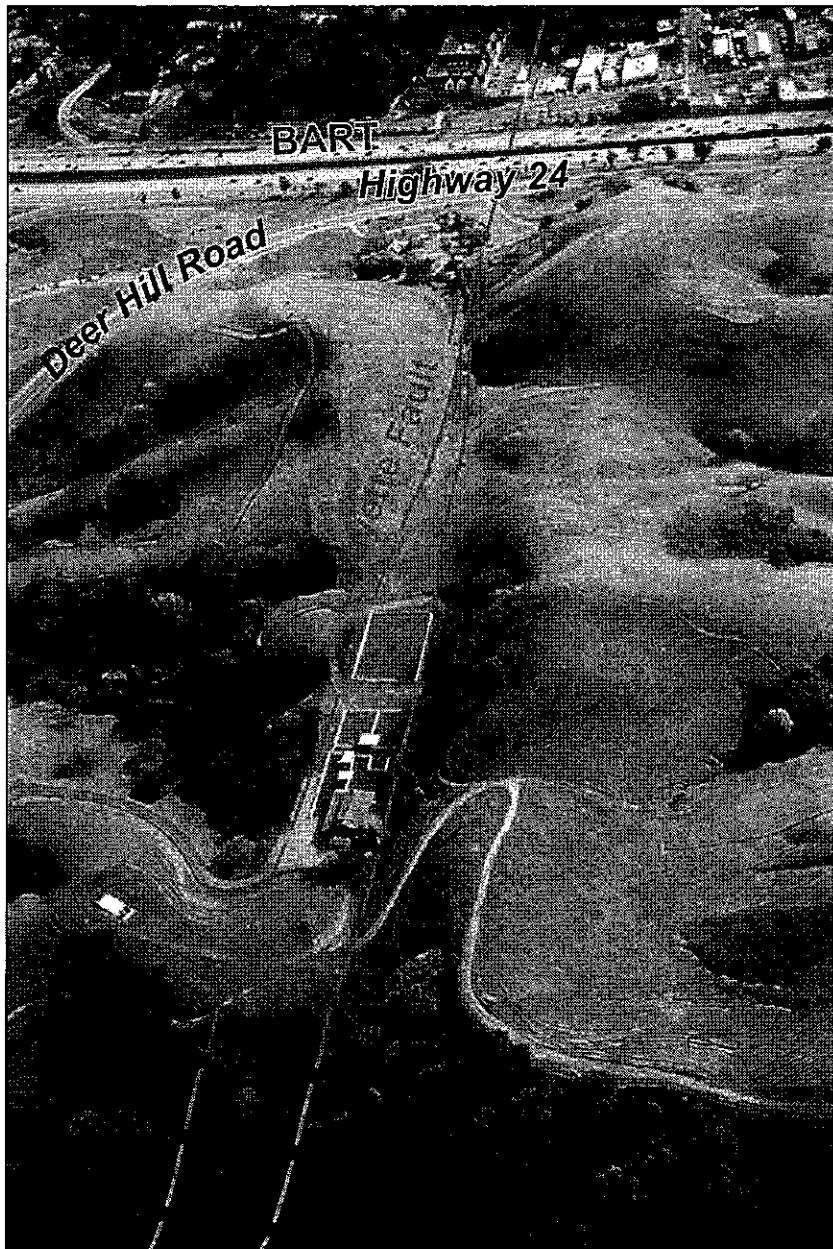
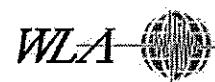


Figure 13. Oblique aerial photograph looking south along the Lafayette fault, showing linear trough along the fault directly north of the BART C-Line and Highway 24.

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truncated bedrock spurs along the western margin of Reliez Valley. Unruh and Kelson (2002) interpret the Reliez Valley fault as a potentially active fault.

The location of the Reliez Valley fault at the C-Line is based on the projections of linear hillfronts within Reliez Valley north and south of the Highway 24/BART corridor. The location of the fault at the C-Line is based on the projections of these linear features, and is poorly constrained to lie within a zone about 160 m wide (530 ft; Table 4). Although track alignment data from the C1 track show possible evidence of right-lateral deformation at the western abutment of the aerial structure over Pleasant Hill Road (about MP 13.50; M. Brown, personal communication, 2005), our field reconnaissance showed an absence of additional evidence of possible active creep at this locality. In the absence of additional information, we estimate that the Reliez Valley fault crosses the C-Line between about MP 13.50 and 13.60 (Table 4). The C-Line crosses this fault either at the Pleasant Hill Road aerial structure, or at grade (and underlain by engineered fill or native soil) west of the western abutment of this aerial structure. There are no exposures or trench data to further constrain the fault crossing location.

4.1.4 Saklan Fault

The Saklan fault (Figure 12) extends northward from the western side of Castle Hill (Woodward-Clyde Consultants, 1976, 1978, 1979a, 1979b), which is at the northern end of the northern Calaveras fault, to an intersection with the Franklin fault of Wagner (1978) (which is also the Calaveras fault of Saul [1973], Dibblee [1980], and Graymer et al. [1994]) (Figure 2). The northern projection of the Saklan fault extends into the “Larkey lineament zone” of Unruh and Kelson (2002) through the cities of Walnut Creek and Pleasant Hill. This alignment coincides with the truncation of a prominent northwest-striking ridge composed of Tertiary sandstone at the intersection of Highways 680 and 24 (Figure 12). The Saklan fault and Larkey lineament are associated with several strongly pronounced geomorphic features, including saddles, linear drainages, and vegetation and tonal lineaments (Unruh and Kelson, 2002). The location of the Saklan fault at the C-Line is based on the projections of these linear features to the north and south, and is constrained to lie within a zone about 160 m (530 ft) wide (Table 4). Unruh and Kelson (2002) interpret the Saklan fault as a potentially active fault.

The Saklan fault coincides with the Calaveras fault identified for the BART Systemwide Seismic Vulnerability Study, which was mapped beneath Walnut Creek Aerial Guideway Segment A9-P15 (Woodward-Clyde-Sherard & Assoc. 1966; Bechtel/HNTB, 2002). The general location of the fault crossing is consistent with the fault trace mapped by several workers (Saul, 1973; Dibblee, 1980;

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Graymer et al., 1984; Crane, 1988b; Geomatrix, 1998) and with a truncated ridge spur identified by Unruh and Kelson (2002). Bechtel/HNTB (2002) showed the fault between Abutment A9 and Bent P10, at about MP 14.93 (C1 station 1751+00), with a fault-zone width of about 50 ft (15 m). This specific location, first identified by mapping of the freeway cut by Woodward-Clyde-Sherard & Assoc. (1966) as part of a geologic and soils investigation for the BART alignment, was based on juxtaposition of distinctive geologic units, a change in strike and dip across the zone, truncation of a shale unit against a sandstone unit, and by the, “general sheared nature of the rocks exposed along this zone” (Woodward-Clyde-Sherard, 1966, p. 5). The shale bedrock mapped directly east of the fault zone was described as highly sheared and containing abundant springs. Based on this field mapping, the primary strand of the Saklan fault is between C1 station 1750+70 and 1751+50 (MP 14.93 and 14.94). Later work by CalTrans (1993) indicates the presence of secondary faulting adjacent to this fault zone, as exposed in construction cuts bordering the western margin of Highway 680.

The Saklan fault also includes a zone of faulting between about MP 14.93 and MP 15.03, based on geologic observations documented during excavations for the Highway 680/24 interchange (CalTrans, 1993), and borehole data collected for the aerial structure (Woodward-Clyde-Sherard, 1966; Tudor/PBTB, 1967). Photographs and geologic logs of exposures excavated during construction of the Highway 680/24 interchange suggest that, in addition to the fault strand at MP 14.93 identified by Woodward-Clyde-Sherard (1966), the Saklan fault includes a secondary fault strand that crosses the Walnut Creek aerial structure at about MP 15.02 (C1 station 1755+70; Figures 14 and 15). This strand of the Saklan fault coincides with the mapped trace of Dibblee (1980), and was exposed in a west-facing construction cut in July 1993 (the “Eastern Cut”; Figure 14). This fault has prominent slickensided surfaces, juxtaposes bedrock units, and may be associated with a change in soil thickness at the ground surface. Based on a tonal lineament on oblique aerial photography (Figure 15) that coincides with the fault identified in the construction cut, this eastern fault strand has a strike of about N10°W, and projects northward to a location west of Bent P13 (Figure 14). Field observations documented by CalTrans (1993) suggest that this feature dips moderately (about 60°) to the west, and is associated with up-on-the-west (reverse faulting) movement as well as right-lateral offset. A similar fault strand also was exposed about 270 ft (80 m) north of Oakvale Road in a 1992 construction cut (the “Northern Cut”; Figure 14), where it is about 20 ft (6 m) wide in Tertiary siltstone and claystone bedrock (CalTrans, 1993). The C-Line crosses this secondary strand at about MP 15.02 (C1 station 1755+70).

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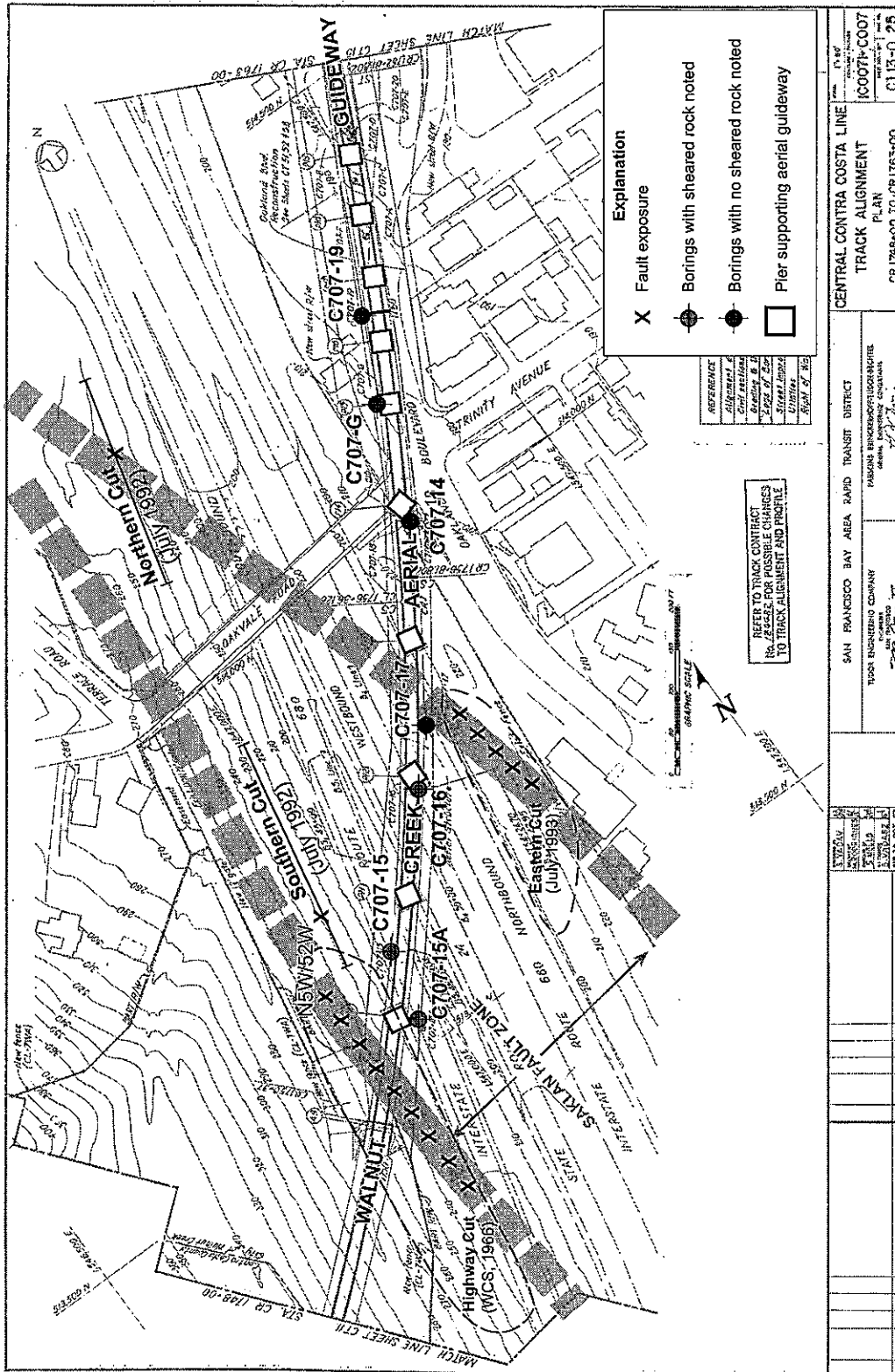


Figure 14. Map of the Saklan fault crossing of the BART C-Line, showing locations of "Northern Cut", "Southern Cut", and "Eastern Cut" documented by CalTrans (1993), and inferred locations of faults based on these exposures, BART borehole data, observations by Woodward-Clyde-Sherard (WCS, 1966), and mapping by Unruh and Kelson (2002).

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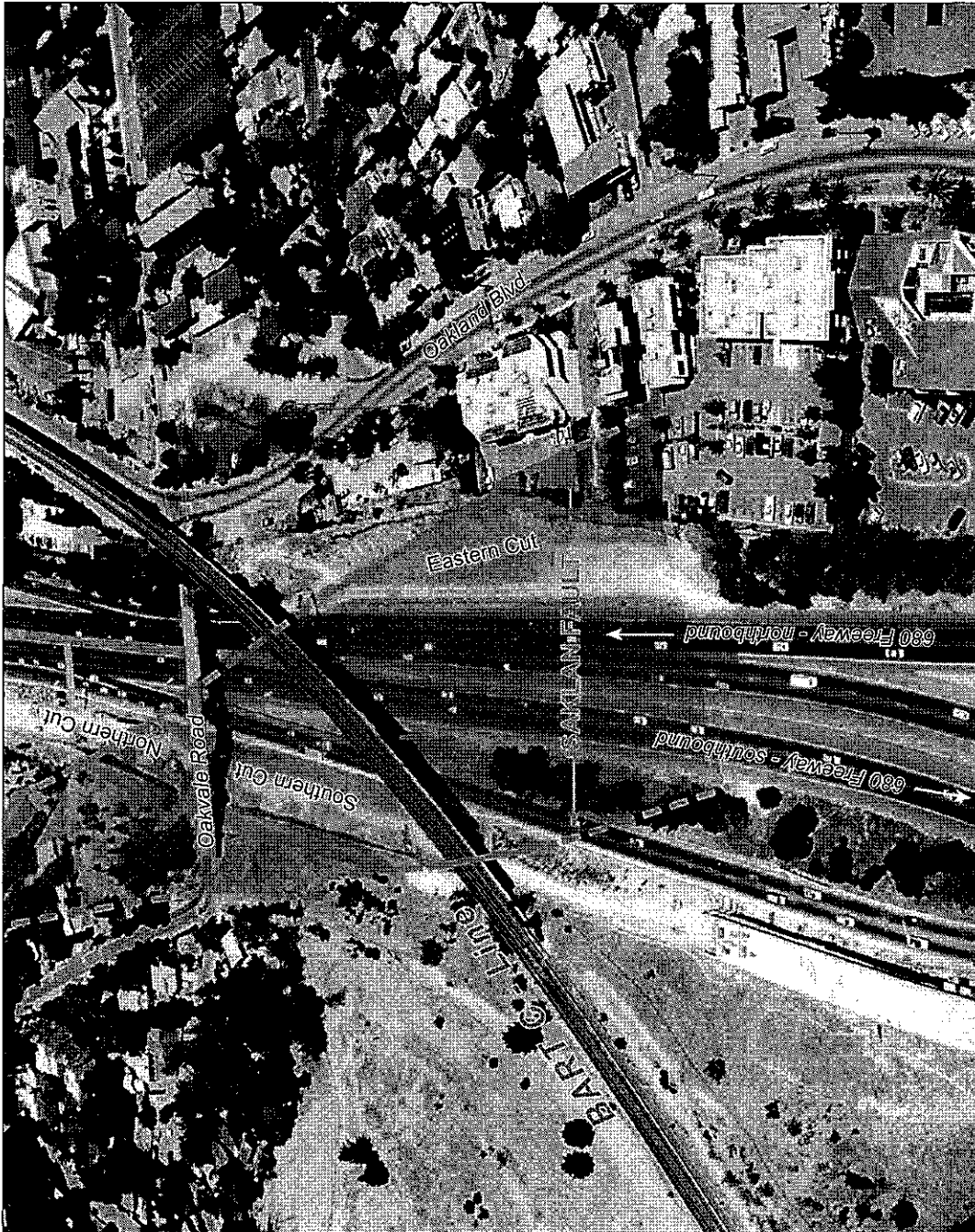
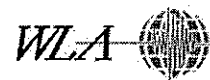


Figure 15. Oblique aerial photograph looking north along the Saklan fault crossing of the BART C-Line, showing inferred locations of fault strands beneath the Walnut Creek Aerial Guideway. CalTrans aerial photograph number 93-05632-6, July 15, 1993.

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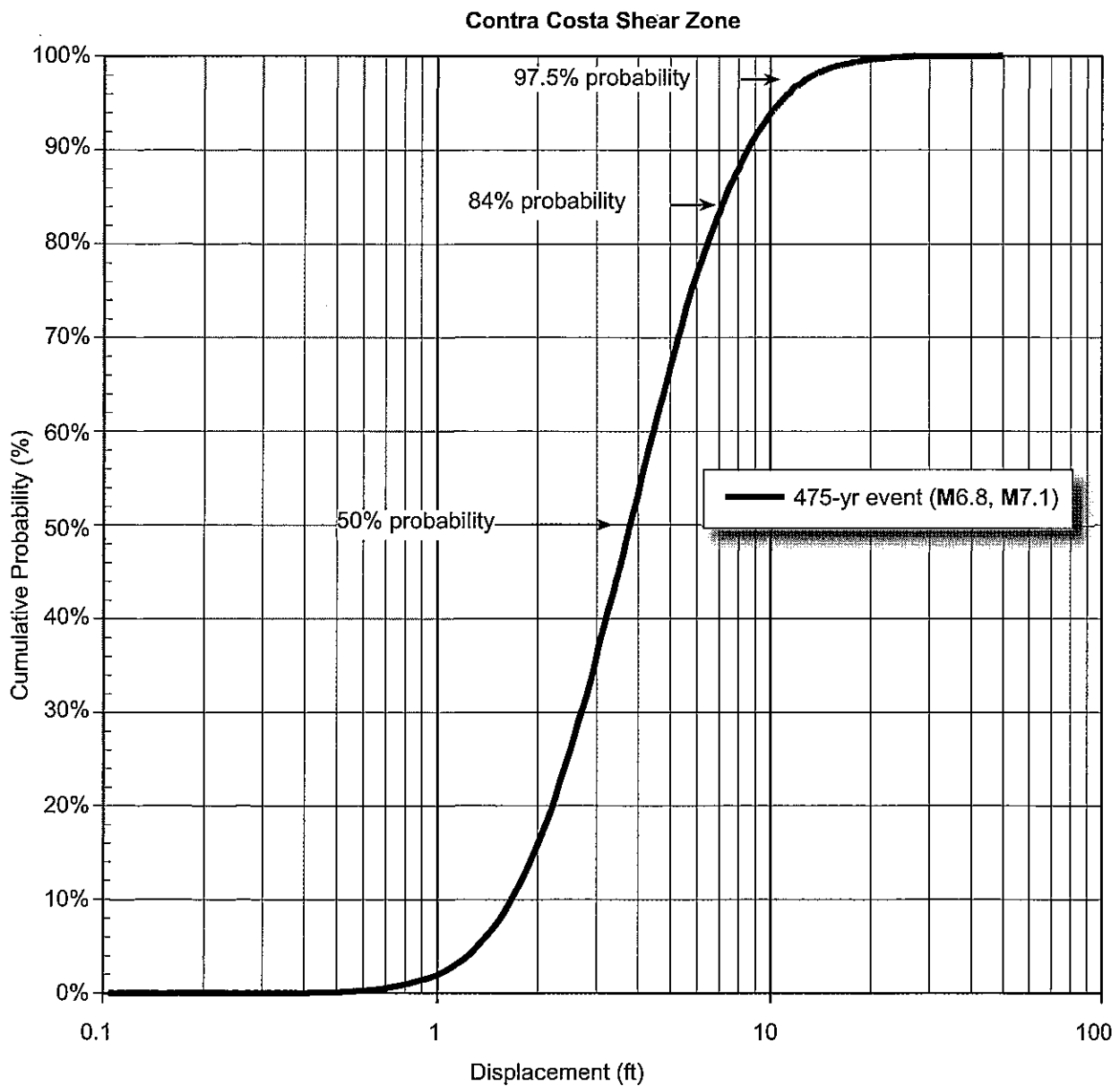
Shallow boreholes along the Walnut Creek aerial structure alignment show the presence of fractured and sheared sandstone and shale in the vicinity of the Saklan fault strands (Tudor/PBTB, 1967). Geologic data from three boreholes (C707-15A, -15, and -16, Figure 14) located near the western fault strand indicate that the bedrock is sheared in the area now crossed by the aerial structure. In addition, boreholes east of the secondary strand (C707-14, -G, and -19, Figure 14) do not exhibit evidence of shearing in the sandstone and shale bedrock, suggesting that the Saklan fault zone is located primarily between MP 14.93 and 15.03 (Table 4).

4.2 Expected Amount of Surface Fault Displacement across the CCSZ

There is no historical information on the amount of coseismic slip that occurs during large-magnitude earthquakes on faults within the CCSZ, as there are no direct measurements of coseismic displacement along the shear zone or along the northern Calaveras fault to the south. In addition, the WG02 study (WGCEP, 2003) did not address the CCSZ as a potential seismic source, and therefore a magnitude-frequency relationship is not readily available for this fault system. As an approximation, we use magnitude-frequency relationships for the Calaveras fault from WG02 to select the scenario earthquake for the CCSZ, based on the likely structural connection and activity of the northern Calaveras fault and the CCSZ (Unruh and Kelson, 2002). As noted in Section 2.1, we consider a scenario earthquake with a return period of 475 years (probability of occurrence of 10% in 50 years), which has a magnitude between approximately M6.8 and M7.1 based on WG02 frequency-magnitude relationships (WGCEP, 2003) (Table 1). The M6.8 event accounts for creep that may be occurring in the seismogenic crust, whereas the M7.1 event represents a 475-year earthquake based on our re-calculation of the WG02 frequency-magnitude relationships to remove the effects of fault creep.

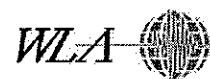
Although there is no documented evidence of fault creep on any fault within the CCSZ, the structural connection between the creeping northern Calaveras fault and the CCSZ provides a reasonable probability that the CCSZ also experiences some aseismic creep. The WG02 model estimates an R scaling factor of 0.9 ± 0.1 for the northern Calaveras fault, and we assume this range is applicable to the CCSZ in order to quantify the effect of fault creep on the amount of surface fault rupture. We use an R_s value of 0.9 ± 0.1 in Equation [3] to estimate the expected amount of surface displacement along the CCSZ, following the approach outlined in Section 2.0, as summarized in Table 4. Results from the two estimates of the 475-year event are averaged to produce a displacement curve for the 475-year scenario earthquake. Displacements expected during the 475-year (M6.8 to M7.1) scenario earthquake are portrayed on a cumulative probability plot (Figure 16). The expected displacements during the 475-year scenario

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Figure 16. Cumulative probability versus displacement curve for the 475-year scenario earthquake on the Contra Costa Shear Zone where it crosses the C-Line in Lafayette and Walnut Creek. Displacement values at 50%, 84%, and 97.5% probability, indicated by arrows, are included in Table 5.



earthquake are shown on Table 5. These displacements will be distributed across the entire fault zone, as described in Section 4.3 below.

Table 5. Expected fault displacements (in feet) at the C-Line from the 475-yr Scenario Earthquake on the Contra Costa Shear Zone, for selected cumulative probabilities.

Return Period	Scenario Earthquake	Cumulative Probability				
		2.5%	16%	50%	84%	97.5%
475 yr	M6.8	0.7 ft	1.4 ft	2.6 ft	4.9 ft	8.8 ft
475 yr	M7.1	<u>1.4 ft</u>	<u>2.6 ft</u>	<u>5.0 ft</u>	<u>9.4 ft</u>	<u>17.1 ft</u>
	<i>Average:</i>	1.1 ft	2.0 ft	3.8 ft	7.2 ft	13.0 ft

4.3 Expected Distribution of Fault Displacement across the CCSZ

As noted in Section 2.5 above, surveys of recent historical surface ruptures show that the total amount of surface displacement includes both near-fault and off-fault deformation (Lawson, 1908; Kelson et al., 2001; Rockwell et al., 2002). Because there have been no documented surface ruptures on the CCSZ, we rely on the rupture characteristics documented by Rockwell et al. (2002) and the characteristics of faults within the CCSZ to estimate the distribution of offset along this part of the C-Line.

Section 4.2 summarizes the local characteristics of the CCSZ near the C-Line, and states that the entire fault zone spans a distance of about 2.2 miles (3.5 km) between MP 12.85 and 15.03 (Figure 12). Based on our field observations and geologic information, we construct an interpretive transect across the fault zone showing the inferred distribution of lateral slip (Figure 17). This plot shows the percentage of total displacement that is expected to occur within individual, 50-ft-wide zones across the entire CCSZ. This interpreted distribution is based on the relative width and character of the four faults, including the length of fault strands, geomorphic expression, and continuity with other faults within the CCSZ (Unruh and Kelson, 2002). Although we cannot preclude the possibility that the total amount of surface deformation may occur across any one of the faults, we interpret from the pattern of faulting throughout the East Bay Hills that this case is unlikely. The distributed, *en echelon* pattern of faulting suggests that a large earthquake is more likely to generate distributed deformation across several of the faults within the CCSZ. We interpret that, of the total expected deformation within the CCSZ during a large earthquake,

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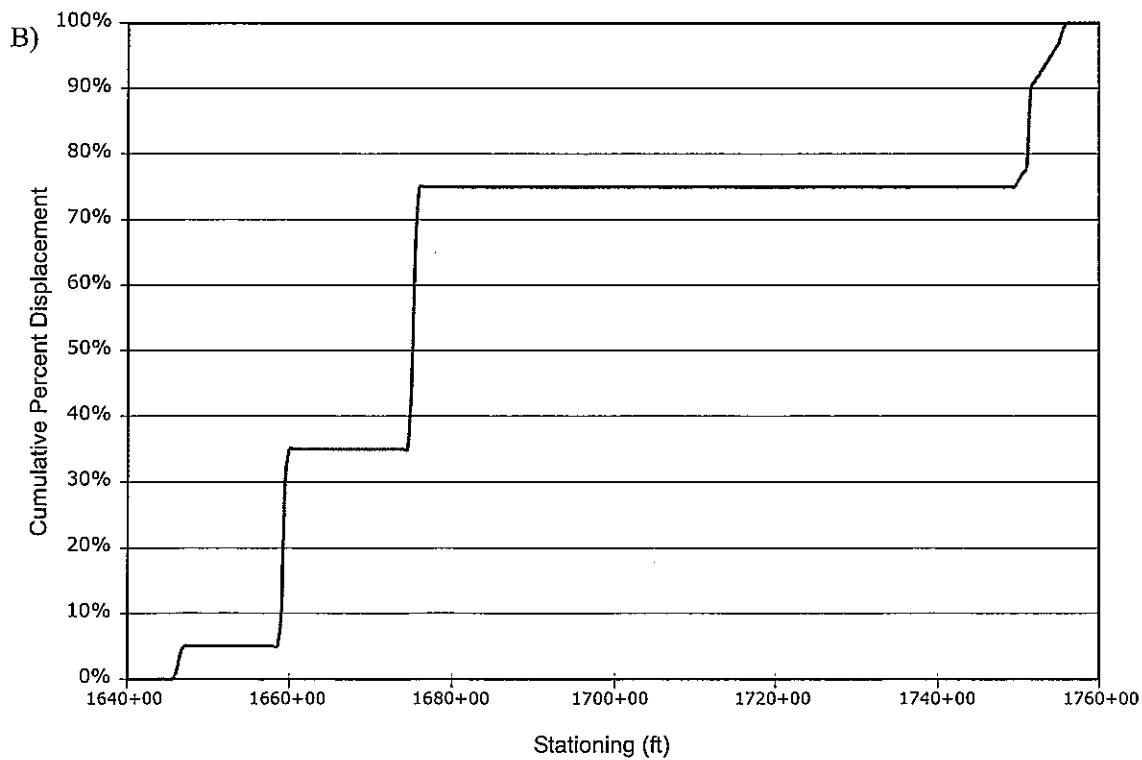
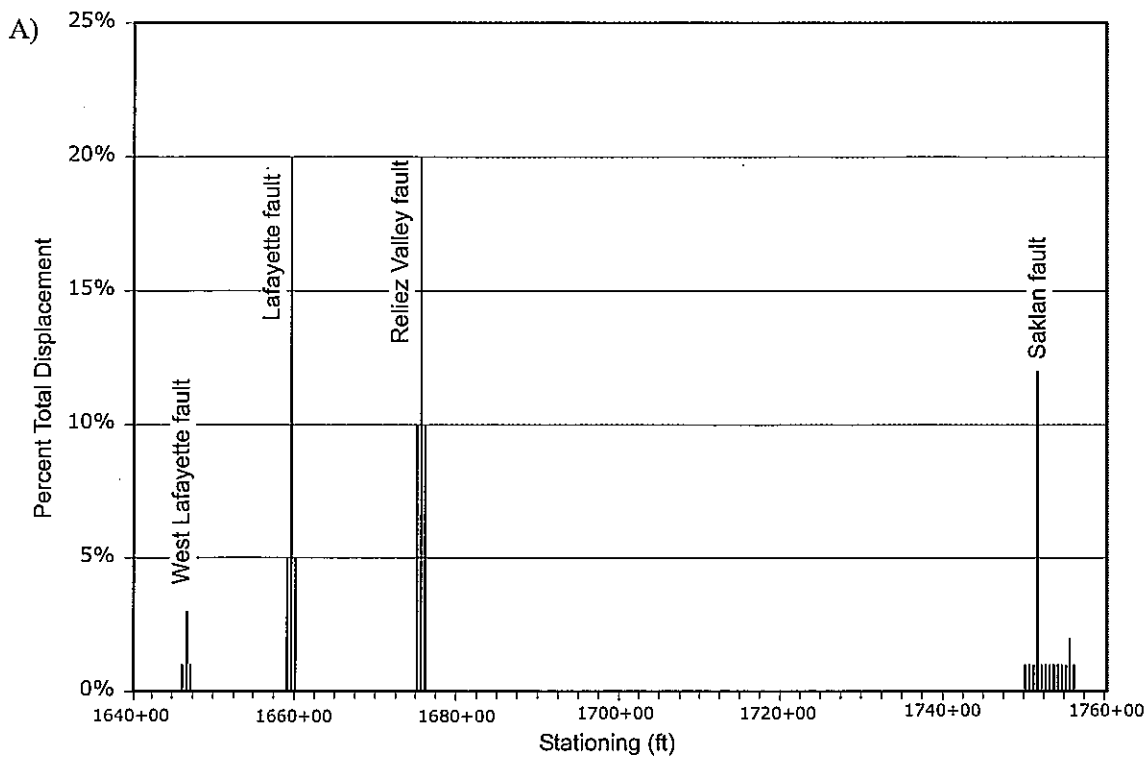
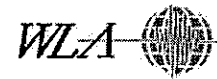


Figure 17. (A) Histogram showing percentage of total expected displacement along the C-Line where it crosses the CCSZ in Lafayette and Walnut Creek, (B) Cumulative percent plot of total expected displacement across the CCSZ in Lafayette and Walnut Creek.

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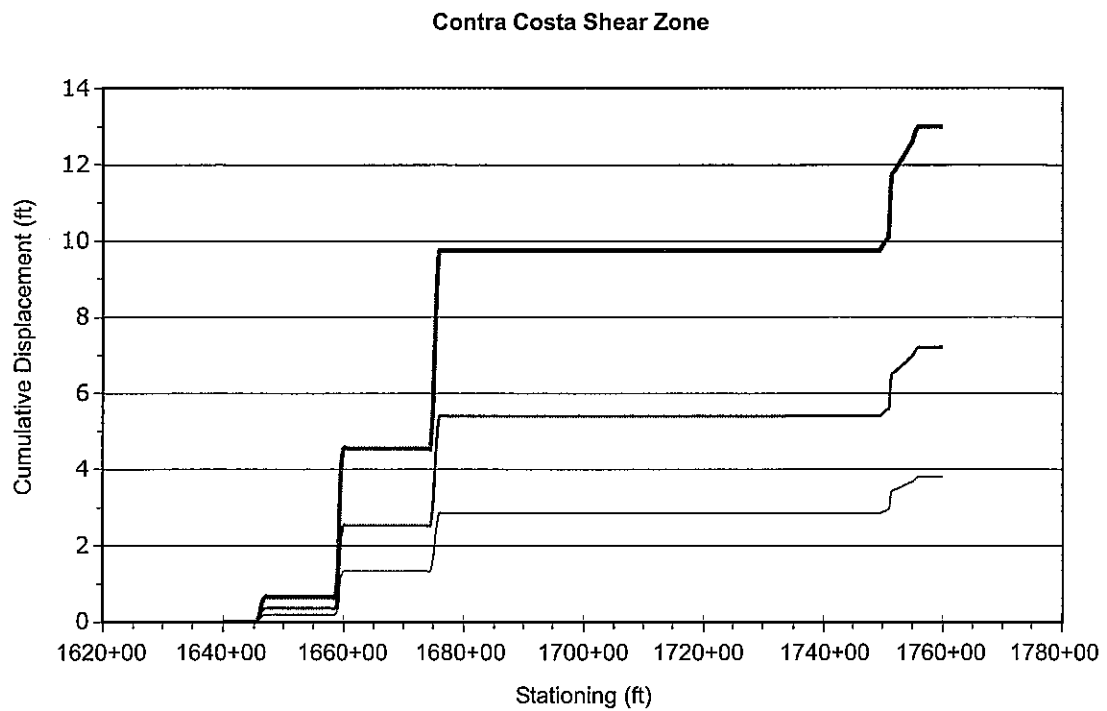
the majority of deformation will be accommodated by the Reliez Valley (40%) and Lafayette (30%) faults, based on their strong geomorphic expression and continuity to the south and north. We estimate that relatively lesser amounts of slip are likely to be accommodated on the Saklan fault (25%) and the West Lafayette fault strand (5%).

Across each of the individual fault crossings, we estimate the distributions of displacement from historical ruptures (Lawson, 1908; Rockwell et al., 2002). For example, we interpret that slightly more than half of the lateral offset along the West Lafayette fault will occur within an 80-ft-wide zone between MP 12.85 and 13.00 (Figure 17). Based on historical examples of near-fault deformation, there likely will be some secondary fault offset or drag folding adjacent to this main fault trace. Similarly, we estimate the amount of expected deformation across the Lafayette and Reliez Valley faults based on the width of the fault zone and historical examples of off-fault deformation. Across the Saklan fault, geologic data shows that two fault strands, which probably accommodate the majority of the slip along the Saklan fault, traverse the Walnut Creek Aerial Guideway. Secondary deformation may occur between these faults.

These interpretations are used herein to estimate the amounts of expected displacement where the CCSZ crosses the C-Line. Table 5 provides the amounts of surface displacement across the CCSZ at cumulative probabilities of 50%, 84% and 97.5% (mean, mean plus one sigma, and mean plus two sigma) for the 475-year scenario earthquake. Based on the inferred percentages of slip across the fault zone (Figure 17) and the estimated amount of total displacement across the entire CCSZ from the scenario earthquakes, the cumulative distribution of slip can be defined. Figure 18 shows the distributions of slip along the C-Line where it crosses the entire CCSZ, for the 475-year scenario earthquake. Figure 19 provides a detailed depiction of the expected cumulative displacements across the four individual faults within the CCSZ.

Within geologic uncertainties, both the West Lafayette and Lafayette faults cross the C-Line with an approximately orthogonal orientation (Figure 12). The Reliez Valley fault crosses the corridor with a slightly obtuse angle (103° to 112°) that will result in slight extension of the corridor during surface deformation. The C-Line crosses the Saklan fault with an acute angle of about 47° , such that lateral slip on this fault will impose compression on the railway and aerial structure. In addition, it is possible the Saklan fault will impose east-directed reverse faulting on the C-Line, with abutment A9 being moved toward about $N80^{\circ}E$ to $N85^{\circ}E$. This movement will also result in uplift of the abutment relative to the Guideway, and will impose compression on the structure.

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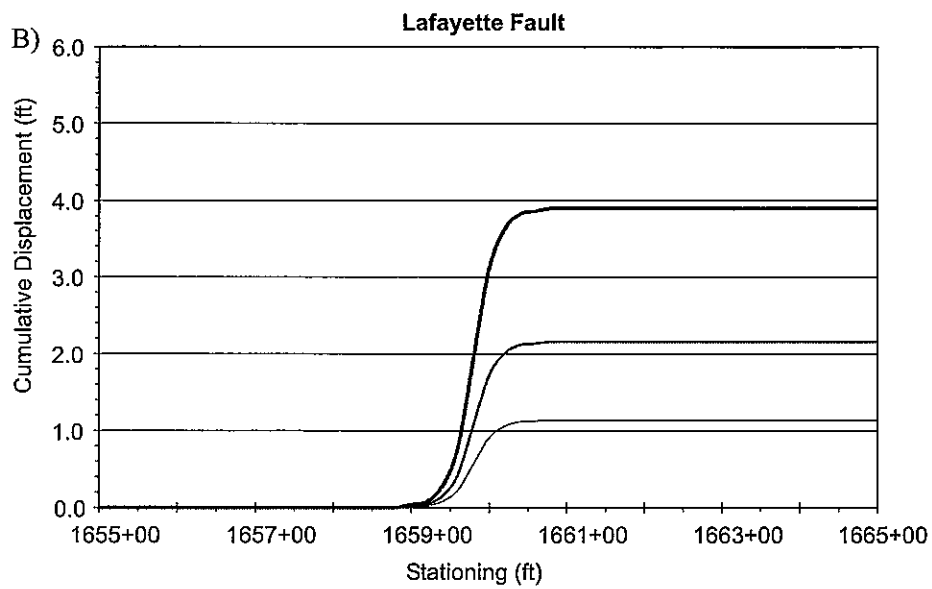
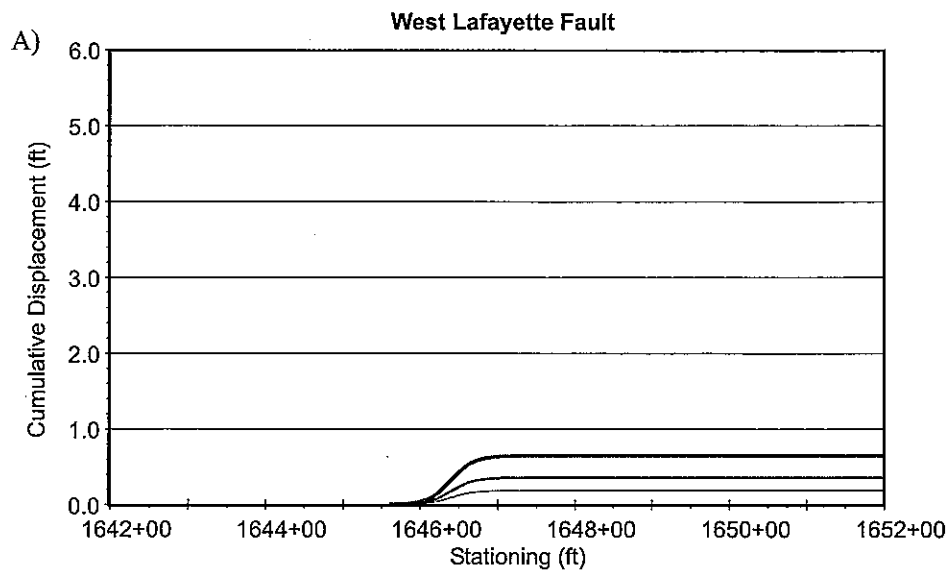
Explanation

475-year event

- 97.5% Cumulative Probability
- 84% Cumulative Probability
- 50% Cumulative Probability

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Figure 18. Plot of cumulative displacement across the Contra Costa Shear Zone in Lafayette and Walnut Creek, for cumulative probabilities of 50%, 84%, and 97.5% for the 475-yr scenario earthquake.



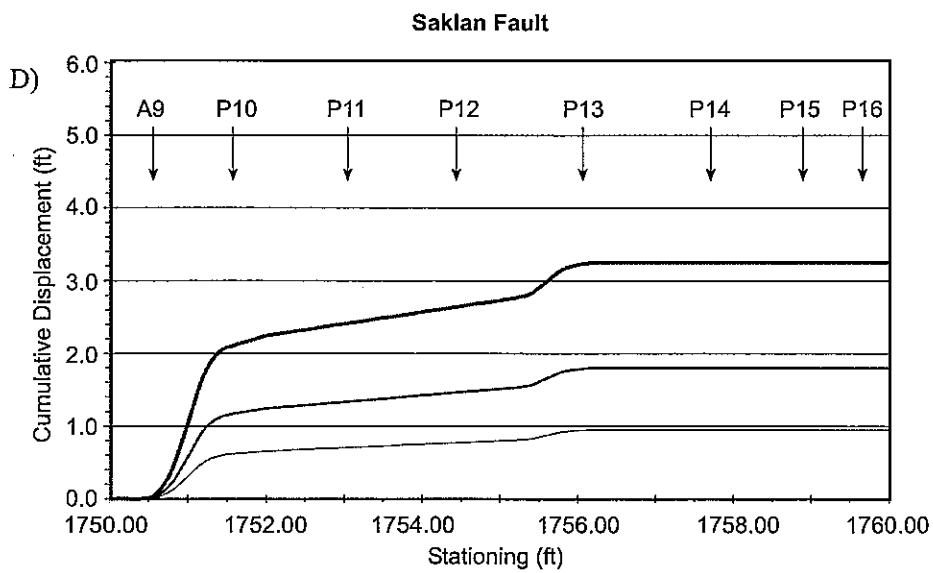
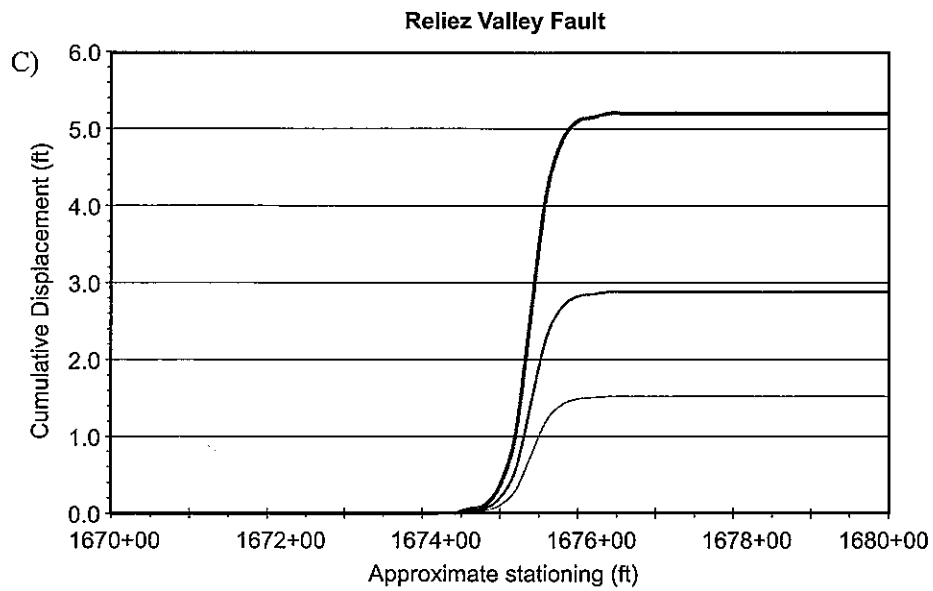
Explanation

475-year event

- 97.5% Cumulative Probability
- 84% Cumulative Probability
- 50% Cumulative Probability

Figure 19. Plots of cumulative displacement across individual faults within the Contra Costa shear zone for cumulative probabilities of 50%, 84%, and 97.5% for the 475-yr scenario earthquake: (A) West Lafayette fault, and (B) Lafayette fault.

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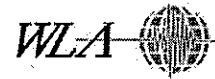


Explanation
475-year event

- 97.5% Cumulative Probability
- 84% Cumulative Probability
- 50% Cumulative Probability

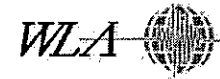
Figure 19 (continued): (C) Reliez Valley fault, and (D) Saklan fault, showing locations of abutment A9 and piers P10 to P16.

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The amounts of coseismic vertical displacement that may occur across the CCSZ are not quantified at this time. For the purposes of this analysis and in the absence of better information, we conservatively estimate that the amount of vertical slip during surface ruptures along the strike-slip West Lafayette, Lafayette, and Reliez Valley faults is about 10 to 30% of the lateral slip as shown on Figures 18 and 19, with a sense of slip of either up-on-the-west or up-on-the-east. The Saklan fault may accommodate a higher component of vertical separation, and thus we suggest that the amount of vertical displacement across the two strands collectively is roughly 50 to 75% of the values shown on Figures 18 and 19 (about 0.9 to 1.4 ft at the 84% cumulative probability). The sense of this vertical slip, if it occurs, would most likely be up-on-the-west based on the sense of long-term uplift exhibited by bedrock units and movement indicators on exposed fault planes.

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5.0 EXPECTED DISPLACEMENT AT THE C-LINE/CONCORD FAULT CROSSING

The 16- to 24-km-long Concord fault is the southern component of the Concord-Green Valley fault system in the eastern San Francisco Bay area (Figure 1). The fault extends from the city of Walnut Creek on the south, through downtown Concord, and to the Carquinez Strait/Suisun Bay on the north (Figure 2). In the vicinity of the C-Line, the location, width, and other characteristics of the Concord fault at the crossing are fairly well constrained. The C-Line crosses the Concord fault obliquely at Systron Drive, about 1500 feet south of the Concord station (Figure 20). The fault has a right-lateral sense of slip with a minor component of vertical displacement, such that the area northeast of the fault moves southeastward (and slightly upward) relative to the area southwest of the fault. The geometric relation between the north-trending C-Line and the northwest-striking fault results in relative contraction of the tracks as a result of fault creep and/or fault rupture. This section first summarizes relevant characteristics of the Concord fault, reviews available data on the location and width of the fault near the C-Line, and then develops estimates of the expected amount and distribution of fault displacement during the scenario earthquake on the Concord fault.

5.1 Concord Fault Characteristics

The Concord-Green Valley fault system is about 56 km long, and includes the Concord fault from Walnut Creek on the south to Suisun Bay, and the Green Valley fault from Suisun Bay to Wooden Valley, northwest of Cordelia, on the north (Baldwin and Borchardt, 2001; Bryant and Cluett, 1998). The intersection of these two faults commonly is interpreted to be at a 1-km-wide stepover beneath Suisun Bay (WGCEP, 2003; Baldwin and Borchardt, 2001; Bryant and Cluett, 1998), which may influence or control the length and continuity of possible earthquake ruptures. It is uncertain whether the Concord-Green Valley fault system is a single seismic source capable of generating large earthquakes, or if the fault consists of independent rupture segments that are capable of producing only moderate-sized earthquakes (Baldwin and Borchardt, 2001). The WG02 (WGCEP, 2003) considers earthquake scenarios involving rupture on either the Concord or Green Valley faults, and on the combined Concord-Green Valley fault system. Overall, the WG02 study concludes that there is a 4% chance of a $M \geq 6.7$ earthquake on the Concord-Green Valley fault system within the period from 2002 to 2031.

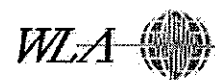
Large earthquakes have not occurred on either the Concord or Green Valley faults during the historical period, although an $M 5.4$ earthquake occurred on the central part of the Concord fault in 1955 (WGCEP, 2003). There are no definitive paleoseismic data documenting the occurrence of past large surface-

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Figure 20. Vertical aerial photograph of the Concord fault where it crosses the BART C-Line, showing the fault trace and locations of nearby study sites (in yellow).



rupturing events on the Concord fault; the most detailed trenching to date on the fault concludes that most, if not all, of the deformation exposed in multiple trenches can be explained by active fault creep rather than surface rupture (Borchardt et al., 1999; Baldwin and Borchardt, 2001).

A long-term (geologic) slip rate of 3.4 ± 0.3 mm/yr for the Concord fault is estimated from a 6,000-year record of stream channel offsets at Galindo Creek (Borchardt et al., 1999), which is located adjacent to the C-Line fault crossing (Figure 20). Earlier estimates of slip rate (8 ± 2 mm/yr, Kelson et al., 1992; 6 ± 2 mm/yr, WGNCEP, 1996) were based on regional tectonic models dependent on interpretations of interactions between the Concord and Calaveras faults, which have since been questioned (Unruh and Kelson, 2002). The long-term slip rate on the Green Valley fault (and by association the Concord fault) is estimated to be 2 to 4 mm/yr (Baldwin et al., 2004). Estimates of the long-term slip rate also were biased by early estimates of the creep rate (5.5 mm/yr, Galehouse, 1992), which have since been revised downward (Galehouse, 1998). Aseismic creep on the Concord fault has been measured at two sites in downtown Concord (Salvio Street and Ashbury Drive; Galehouse, 1998; Borchardt and Baldwin, 2001). Over an 18-year period, the average creep rate is 3 to 4 mm/yr, although creep typically is expressed as episodes of rapid slip (7 to 10 mm/yr over a few months) separated by intervals of slow slip (1 to 2 mm/yr over several years) (Galehouse, 1998; Borchardt and Baldwin, 2001). Galehouse and Lienkaemper (2003) provide the most recent estimate of creep rate on the Concord fault from a 21.3-year record, which indicate a rate of 2.7 ± 0.03 mm/yr for the Salvio Street site and a rate of 3.6 ± 0.04 mm/yr for the Ashbury Drive site. In order to encompass these data, we consider a creep rate of 3.1 ± 0.5 mm/yr for the Concord fault at Systron Drive.

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5.2 Site Characteristics of the C-Line/Concord Fault Crossing

The C-Line crosses the Concord fault obliquely at Systron Drive, about 1500 feet south of the Concord station (Figure 20). The fault location and characteristics are fairly well known in the vicinity of this crossing, on the basis of several recent exploratory trenches, pre-development geomorphic expression, and clear evidence of fault creep. In the vicinity of the C-Line, the Concord fault is very well expressed as a linear zone of air-photo lineaments, topographic scarps, a closed depression, and cultural features deformed by active fault creep (Wills and Hart, 1992a). As depicted by CDMG (1993), the linear fault strikes about N30°W across the C-Line. To the northwest of the C-Line, the fault is associated with a prominent closed depression (Keller Lake, Figure 20) related to a small right-step (or bend) in the fault trace. The fault trace shown by CDMG (1993) updates previous mapping by Sharp (1973), Dibblee (1980), and Crane (1988b), through synthesis of many A-P trench studies, field reconnaissance, and air-



photo analysis. Although there have been several A-P studies in the vicinity of the C-Line fault crossing (Figure 20), none exposed the fault. These relationships provide constraint on the location of the fault, and are consistent with evidence of creep and with trenching results at nearby Galindo Creek (Borchardt et al., 1999).

Borchardt et al. (1999) exposed the Concord fault in several trenches directly northwest of the C-Line (Figure 21). The goal of this study was to determine the slip rate and earthquake history of the Concord fault, and the site along Galindo Creek is perhaps the most promising site for such research along the entire fault. Borchardt et al. (1999) excavated a total of 18 trenches, eight of which were oriented across the fault to provide fault exposures. The remaining 10 trenches provided stratigraphic data on past courses of Galindo Creek, from which the long-term fault slip rate was determined. The fault-normal trenches provided excellent constraint on the location and strike of the fault adjacent to the C-Line, as shown on Figure 21. Borchardt et al. (1999) and Borchardt and Baldwin (2001) conclude that discrete offsets of individual strata are rare in these trenches, suggesting that much of the deformation is related to aseismic creep rather than past surface ruptures. This deformation is intense within about 5 ft (1.5 m) of the primary fault strand (Borchardt and Baldwin, 2001), although the total width and character of secondary off-fault deformation was not evaluated in the Galindo Creek study.

Borehole data from along the C-Line also suggest that the primary strand of the Concord fault traverses Systron Drive beneath the aerial structure. Boreholes C008-1 and C008-2 are located on the southern and northern sides of Systron Drive, respectively, and are about 75 feet apart (Figure 21). These boreholes lie on either side of the primary zone of active creep. On the southwestern side of the fault, borehole C008-1 shows the presence of several interbedded clayey sand and gravel beds on the western side of the fault trace, whereas clay-rich deposits dominate borehole C008-2 on the northeastern side of the fault (Bechtel/PBTB, 1969). A sandy clay deposit in the lower parts of both of these boreholes suggests approximately 5 to 10 ft of down-on-the-west vertical separation across the Concord fault. In addition, the elevation of a similar sandy clay deposit in borehole C008-3, located about 400 ft north of borehole C008-2 (Figure 21), suggests that there may be a broad zone of minor, down-on-the-west secondary deformation in the area bordering the primary fault. Based on these nearby trench and borehole data, we interpret that the width of the primary deformation along the Concord fault near the C-Line is no more than about 40 ft (12 m).

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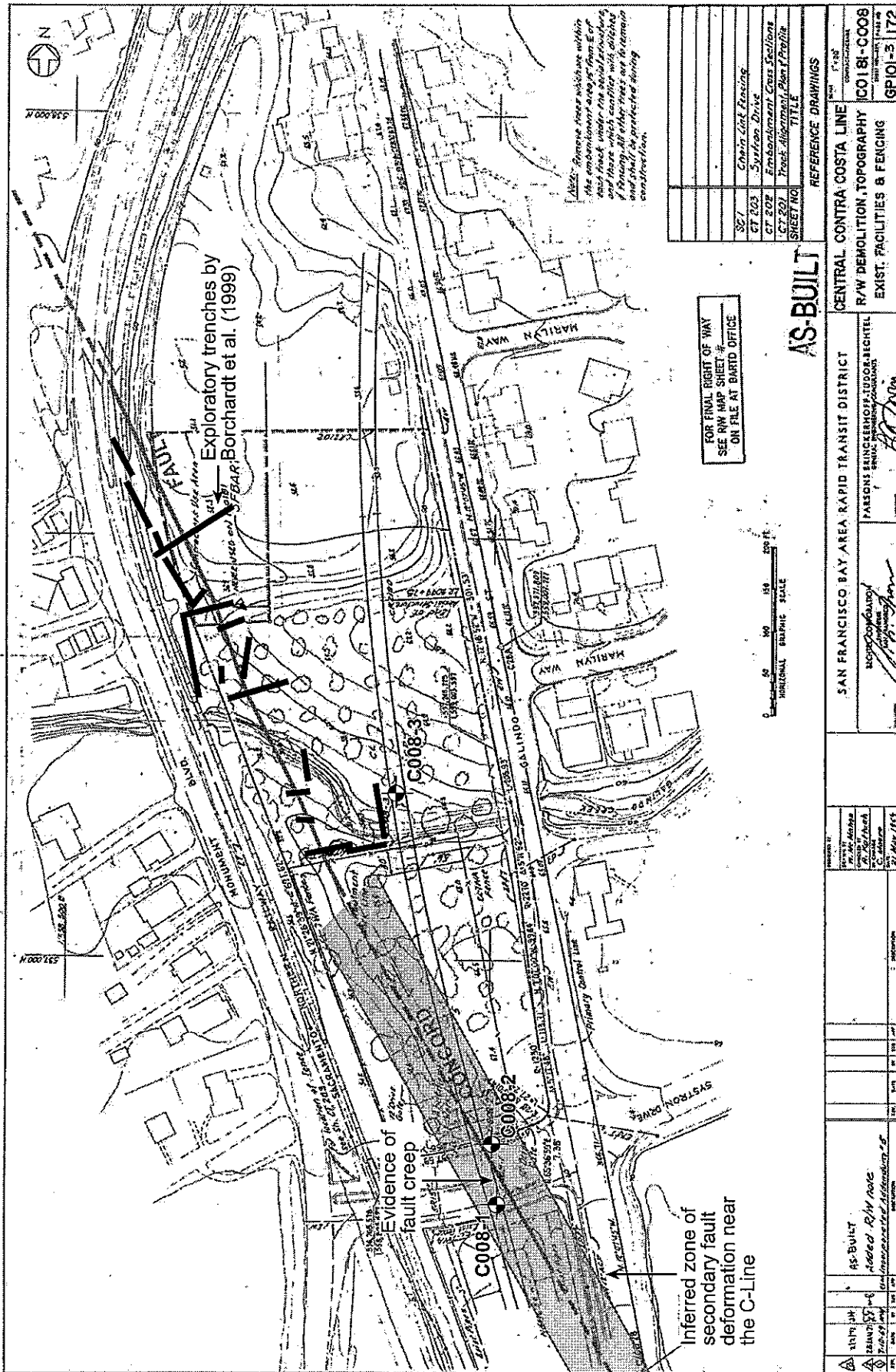


Figure 21. As-built drawing of the C-Line in the vicinity of the Concord fault crossing at Systron Drive, showing location of the Concord fault (in red) and trenches by Borchardt et al. (1999) (in black). Evidence of fault creep is located within Systron Drive beneath tracks.

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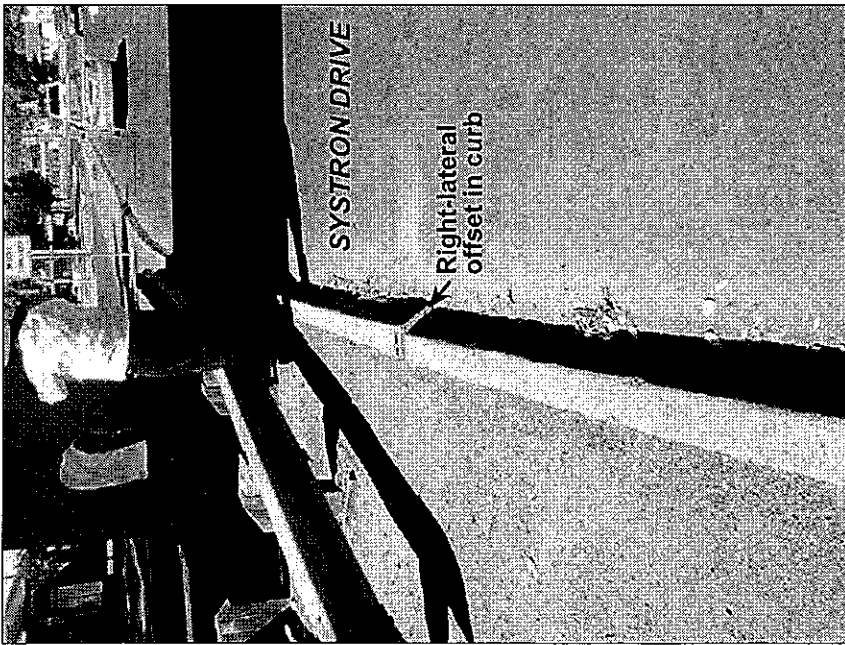
Some of the most prominent evidence of active creep along the Concord fault lies beneath the BART aerial structure at Systron Drive. Wills and Hart (1992b) notes a narrow zone of left-stepping *en echelon* cracks and right-laterally offset curbs at this location. Our field reconnaissance of the fault crossing confirms the presence of cracks in Systron Drive and offset or deformed curbs on both sides of Systron Drive and in the center divider (Figures 22 and 23). The cracks present in Systron Drive have developed in asphalt that was placed on the road surface within the past several years, most likely since Wills and Hart (1992b) first noted the features beneath the aerial structure. There is some evidence suggesting that this active creep is deforming the aerial structure and adjacent BART facilities. For example, we observed contraction of joint filler at the contact between the bridge deck and both the southern and northern abutments, suggesting that fault creep is imposing compressional stress on the aerial structure. In addition, deformation of the C1 and C2 tracks north of the aerial structure (about station 2095+50; M. Brown, BART, personal communication, 2005) may be related to contraction from fault movement.

Based on these field observations, the evidence of fault creep, and nearby trench exposures, we interpret that the zone of primary and secondary deformation along the Concord fault at the C-Line is approximately 80 to 90 ft wide (Figure 21). Because the Concord fault crosses the C-Line with a highly oblique orientation (about 12° to 15°), the apparent distance over which the C-Line traverses the fault zone is as much as about 400 ft (120 m). The geometry of this fault crossing indicates that fault movement imposes compression on the railway and adjacent structures, which is consistent with the field evidence of possible contraction noted above. In summary, the primary strand of the Concord fault crosses the C-Line at about MP 20.5 (between about stations 2093+00 and 2094+00). The entire fault zone, including possible areas of secondary deformation, extends from about MP 20.46 to 20.54 (approximately station 2091+50 to 2095+50). As described below, we interpret that the expected surface displacement will be distributed across this section of the C-Line.

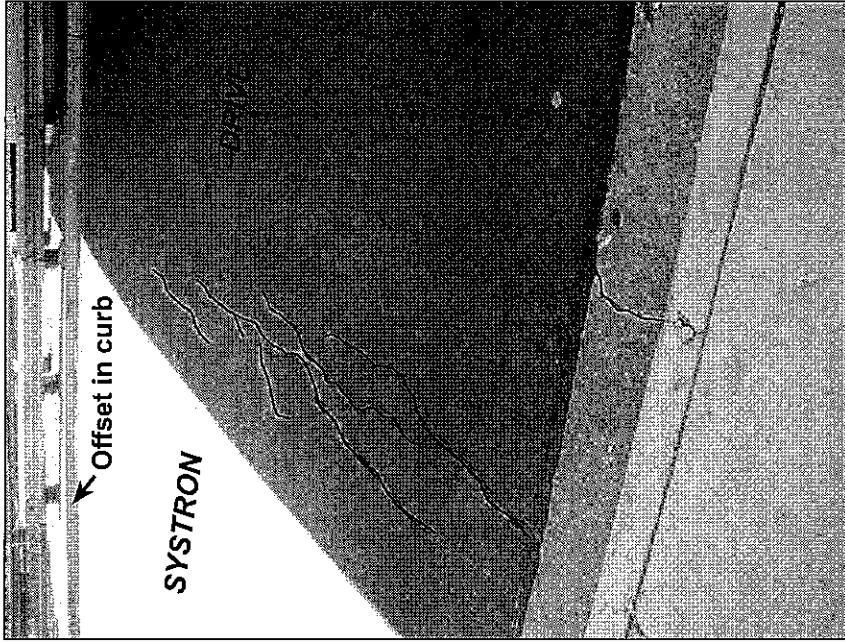
5.3 Expected Amount of Surface Fault Displacement at the Concord Fault Crossing

There is no existing geologic information on the amount of coseismic slip that may occur during a large-magnitude earthquake on the Concord fault. Paleoseismic studies at Galindo Creek show that fault creep dominates the style of surface deformation, with little or no direct evidence of surface fault rupture exposed in multiple trenches (Borchardt et al., 1999). Nevertheless, we cannot preclude the future occurrence of surface rupture on the Concord fault, and thus we develop estimates of displacement using the approach given in Section 2.0. For the purposes of this evaluation, we consider a scenario earthquake on the Concord fault with a return period of 475 years (probability of occurrence of 10% in 50 years),

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A)



B)

Figure 22. A) Photograph looking west along the median divider of Systron Drive beneath the C-Line, showing right-lateral offset of curb; B) Photograph looking southeast along the Concord fault beneath the Systron Drive aerial structure, showing left-stepping cracks in Systron Drive roadway that align with offset median curb. Photographs taken on September 2, 2005.

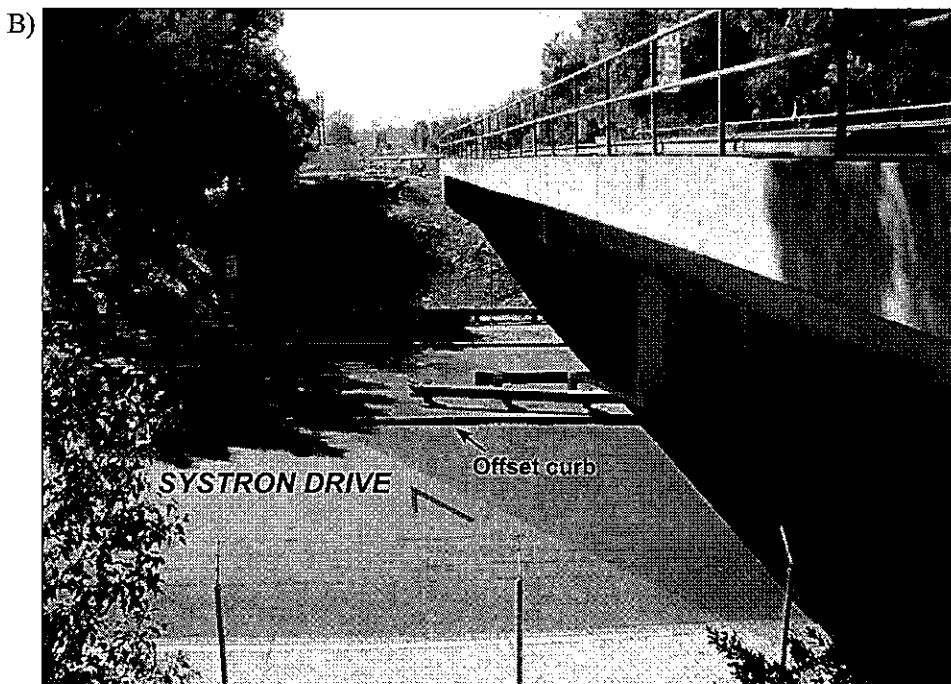
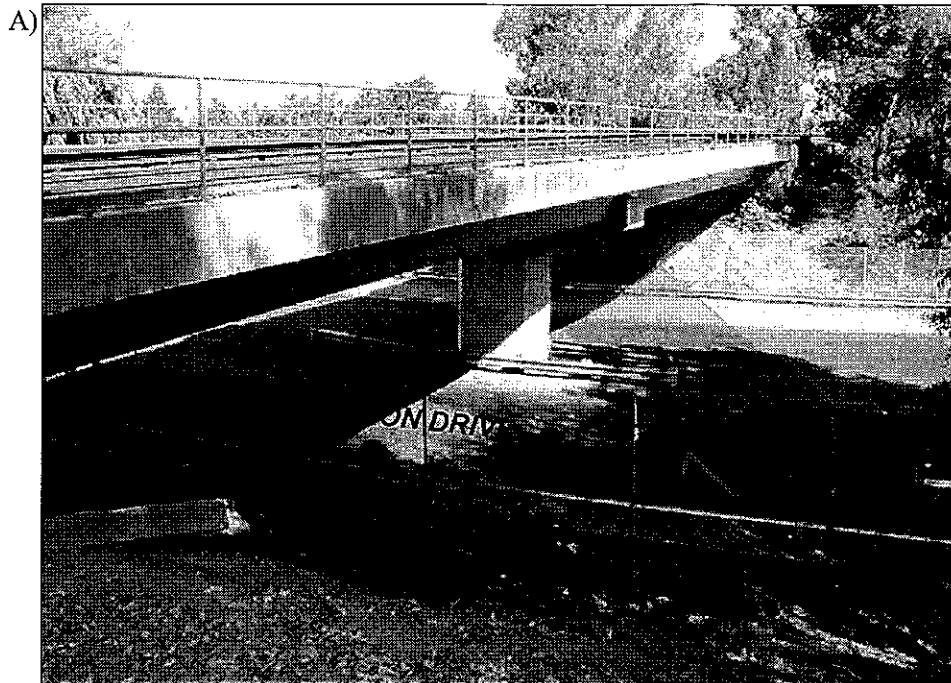
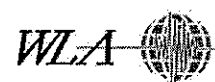


Figure 23. A) Photograph looking north at the C-Line aerial structure over Systron Drive, showing location of the Concord fault. Red stipple represents probable primary zone of fault offset. B) Photograph looking south at the C-Line aerial structure over Systron Drive, showing location of the Concord fault. Photographs taken on September 2, 2005.

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which has a magnitude between approximately M6.5 and M6.9 based on WG02 frequency-magnitude relationships (WGCEP, 2003) (Table 1). The M6.5 event accounts for creep that may be occurring in the seismogenic crust, whereas the M6.9 event represents a 475-year earthquake based on our re-calculation of the WG02 frequency-magnitude relationships to remove the effects of fault creep.

In order to quantify the effect of fault creep on the amount of surface fault rupture, we compared the rate of fault creep with the rate of long-term geologic slip, and adjust the expected amount of surface displacement accordingly. As noted in Section 5.1, the rate of fault creep on the Concord fault in the vicinity of the C-Line fault crossing is 3.1 ± 0.5 mm/yr, and the long-term geologic slip rate is 3.4 ± 0.3 mm/yr. These data suggest a near-surface slip accumulation ratio (R_s) of 0.09 ± 0.17 (see Equation [1] in Section 2.2 above). We use this R_s value in Equation [3] to estimate the expected amount of surface displacement at the C-Line crossing at Systron Drive (Table 6), following the approach outlined in Section 2.0. Results from the two estimates of the 475-year event are averaged to produce the displacement curve for the 475-year (M6.5 to M6.9) scenario earthquake (Figure 24). This analysis indicates that the scenario earthquake will generate an expected median (50% cumulative probability) displacement of 0.3 ft (0.1 m). The 84% (1 standard deviation) and 97.5% (2 standard deviations) cumulative probabilities are 0.7 ft (0.2 m) and 1.4 ft (0.4 m), respectively (Table 6). These displacements will be distributed across the entire fault zone, as described in Section 5.4 below.

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Table 6. Expected fault displacements (in feet) at the C-Line from the 475-yr Scenario Earthquake on the Concord Fault, for selected cumulative probabilities.

Return Period	Scenario Earthquake	Cumulative Probability				
		2.5%	16%	50%	84%	97.5%
475 yr	M6.5	0.0 ft	0.1 ft	0.2 ft	0.4 ft	0.9 ft
475 yr	M6.9	<u>0.0 ft</u>	<u>0.2 ft</u>	<u>0.4 ft</u>	<u>1.0 ft</u>	<u>2.0 ft</u>
	<i>Average:</i>	0.0 ft	0.1 ft	0.3 ft	0.7 ft	1.4 ft

5.4 Expected Distribution of Fault Displacement at the Concord Fault Crossing

As noted in Section 2.4 above, surveys of recent historical surface ruptures show that the total amount of surface displacement includes both near-fault and off-fault deformation (Lawson, 1908; Kelson et al., 2001; Rockwell et al., 2002). Because there have been no documented surface ruptures on the Concord

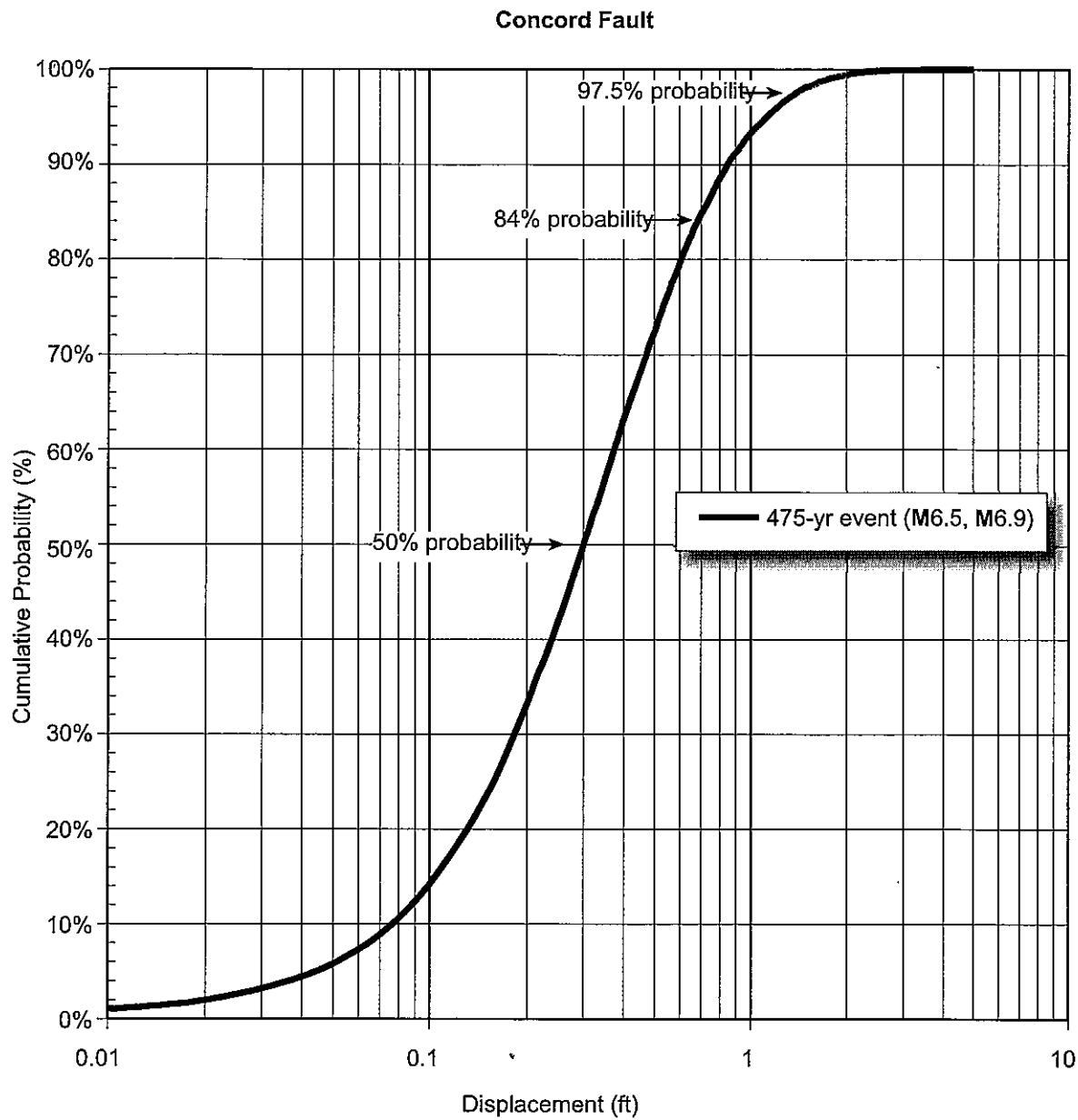


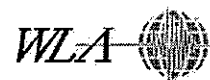
Figure 24. Cumulative probability versus displacement curve for the 475-year scenario earthquake on the Concord fault at the C-Line crossing. Displacement values at 50%, 84%, and 97.5% probability, indicated by arrows, are included in Table 6.

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fault, we rely on the rupture characteristics documented by Rockwell et al. (2002) and the characteristics of the fault in the site vicinity to estimate the distribution of offset along this part of the C-Line.

The location of the Concord fault near the C-Line is well defined by a series of nearby trenches and evidence of fault creep beneath the Systron Drive aerial structure. The fault zone is estimated to be approximately 80 to 90 ft wide. However, because the fault intersects the corridor at a highly oblique angle (about 12° to 15°), the width over which the fault corridor passes through the fault zone is large, spanning a distance of about 400 ft (120 m) between MP 20.46 and MP 20.54 (about stations 2090+80 and 2095+20) (Figure 21). Based on our field observations and nearby geologic information, we construct an interpretive transect along the C-Line where it crosses the fault zone, showing the inferred distribution of lateral slip (Figure 25). This plot shows the percentage of total displacement that is expected to occur within individual, 20-ft-wide zones across the fault. Based on historical examples of near-fault deformation in similar geologic settings, there likely will be substantial secondary fault offset or drag folding adjacent to the main strand of the Concord fault.

These interpretations are used herein to estimate the amounts of expected displacement where the Concord fault crosses the C-Line. The amounts of surface displacement across the Concord fault at cumulative probabilities of 50%, 84% and 97.5% (mean, mean plus one sigma, and mean plus two sigma) for the 475-year scenario earthquake. Based on the inferred percentages of slip across the fault zone (Figure 25) and the estimated amount of total displacement across the Concord fault from the scenario earthquakes, the cumulative distribution of slip is defined. Figure 26 shows the distributions of slip for from the 475-yr scenario earthquake, as projected along the C-Line. As noted above, the Concord fault crosses the C-Line with a highly oblique orientation, such that the apparent width of faulting is much larger than the actual width of the fault zone. The acute geometry between the C-Line and the fault will result in compression of the railway and adjacent structures during fault movement (either aseismic creep or coseismic rupture).

The amount of coseismic vertical displacement that may occur across the Concord fault is not quantified at this time. However, geomorphic evidence of minor uplift across the fault suggests that vertical displacement produced during fault movement is probably about 5 to 10% of the lateral slip as shown on Figure 26 (less than 0.1 ft at the 84% cumulative probability level). The sense of this vertical slip would most likely be up-on-the-east, consistent with the sense of vertical slip in borehole data.

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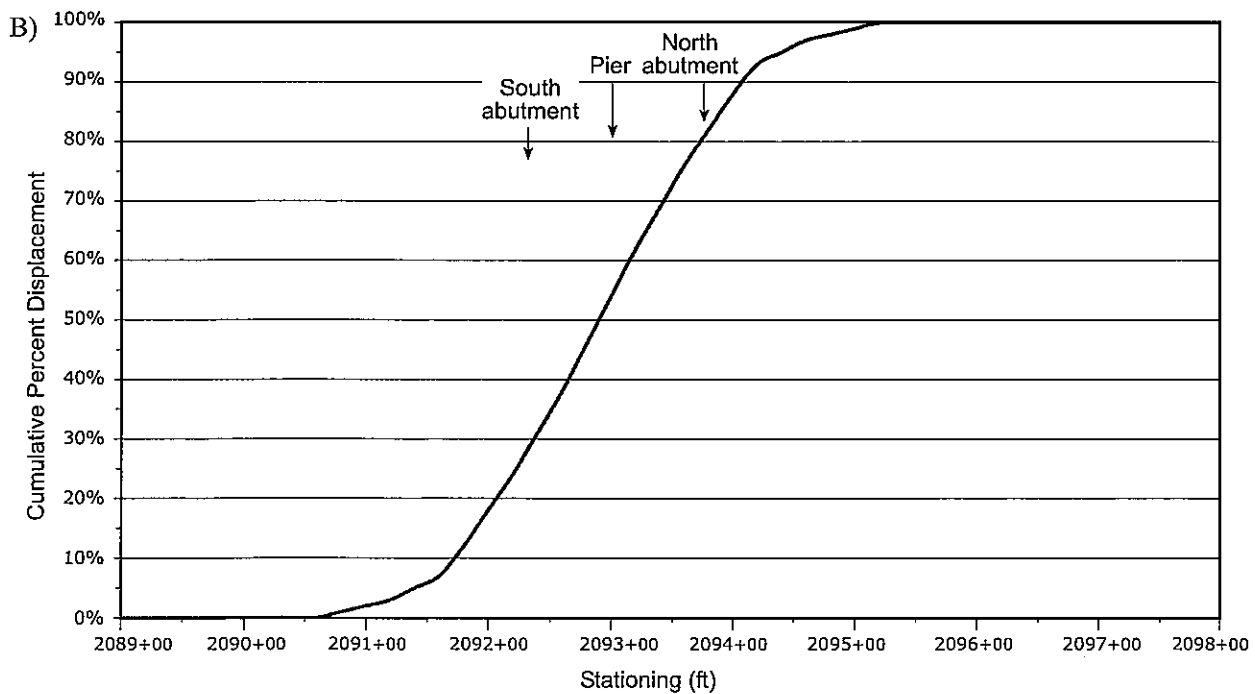
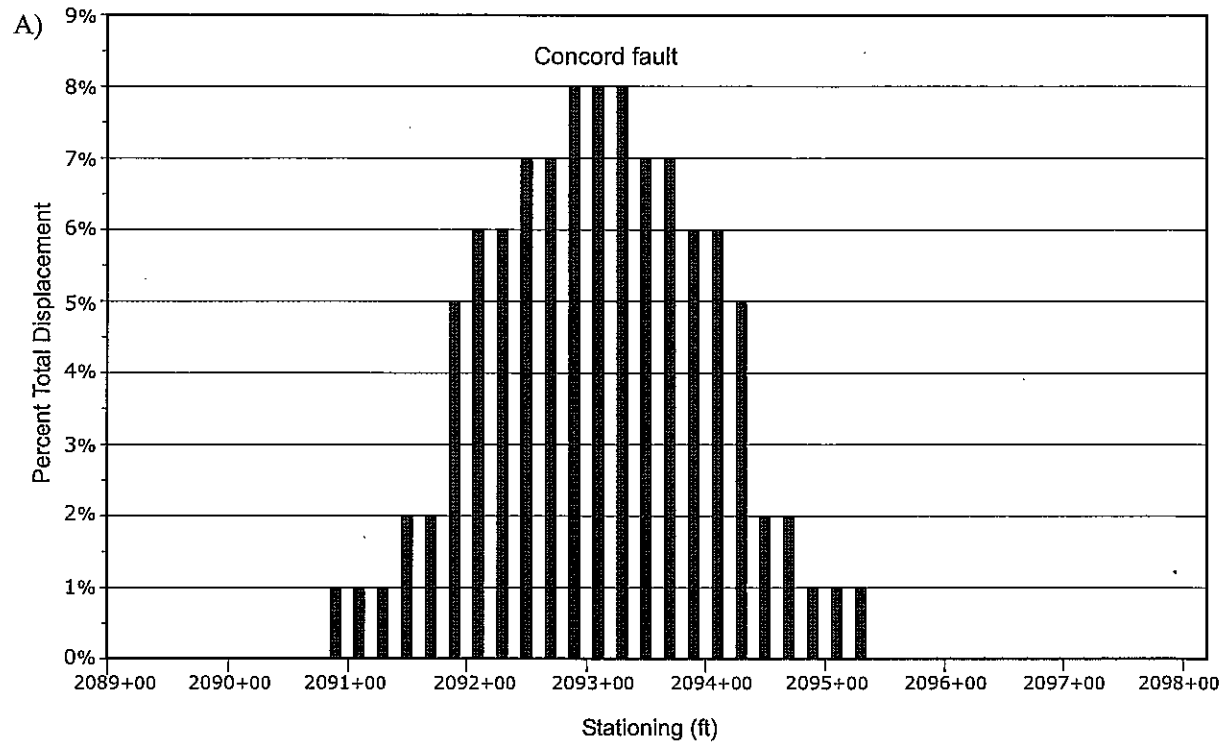
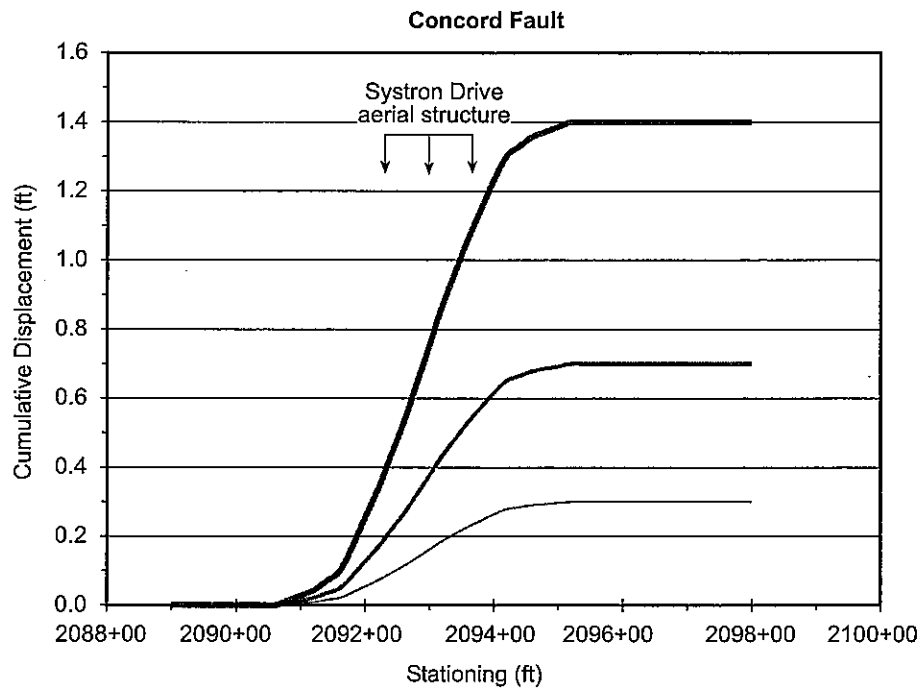


Figure 25. (A) Histogram showing percentage of total expected displacement along the C-Line where it crosses the Concord fault at Systron Drive, (B) Cumulative percent plot of total expected displacement across the Concord fault at Systron Drive.

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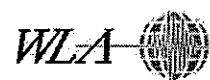
Explanation

475-year event

- 97.5% Cumulative Probability
- 84% Cumulative Probability
- 50% Cumulative Probability

Figure 26. Plot of cumulative displacement across the Concord fault at Systron Drive, for cumulative probabilities of 50%, 84%, and 97.5% for the 475-yr scenario earthquake.

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6.0 SUMMARY AND CONCLUSIONS

The BART C-Line (Bay Point-Concord) crosses three major strike-slip faults in the eastern San Francisco Bay region: (1) the active Hayward fault in the Berkeley Hills Tunnel, (2) the potentially active Contra Costa Shear Zone in the cities of Lafayette and Walnut Creek, and (3) the active Concord fault in the city of Concord. The C-Line crosses the actively creeping Hayward fault in the Berkeley Hills Tunnel, with a geometry that results in primarily right-lateral offset with a small component of extension. Geologic logs of the tunnel and our field observations suggest that the Berkeley Hills Tunnel crosses the Hayward fault zone over a distance of about 980 ft (300 m) wide, including a primary strand at about MP 4.84 and secondary fault strands at about MP 4.75 and MP 4.92. The 475-yr scenario earthquake (M7.0 to M7.2) on the Hayward fault is expected to produce right-lateral displacements with cumulative probabilities of 50%, 84%, and 97.5% as given in Table 7. These displacements likely will be distributed unequally across the fault zone, with a maximum occurring at the primary fault strand at about MP 4.84. Aseismic creep will likely continue to deform the Berkeley Hills Tunnel at a rate of about 3.5 ± 0.5 mm/yr (0.14 ± 0.02 in/yr).

Table 7. Summary of expected displacements (in feet) across primary fault zones crossed by the C-Line, for cumulative probabilities of 50%, 84%, and 97.5%.

Fault Crossing	Return Period	Cumulative Probability		
		50%	84%	97.5%
Hayward Fault	475 yr	3.3 ft	6.5 ft	12.4 ft
Contra Costa Shear Zone (all)	475 yr			
West Lafayette Fault		0.2 ft	0.4 ft	0.7 ft
Lafayette Fault		1.1 ft	2.2 ft	3.9 ft
Reliez Valley Fault		1.5 ft	2.9 ft	5.2 ft
Saklan Fault		<u>0.9 ft</u>	<u>1.8 ft</u>	<u>3.3 ft</u>
Total		3.7 ft	7.3 ft	13.1 ft
Concord Fault	475 yr	0.3 ft	0.7 ft	1.4 ft

The C-Line crosses the Contra Costa Shear Zone (CCSZ) over a distance of about 2.2 miles between the Lafayette and Walnut Creek stations (from about MP 12.85 to MP 15.03). The CCSZ consists of four potentially active fault strands: the West Lafayette (MP 12.95), Lafayette (MP 13.20), Reliez Valley (MP

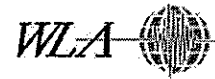
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13.55), and Saklan (or “Franklin”, MP 14.94) faults. The C-Line crosses the first three of these faults in a nearly orthogonal geometry that will result in primarily right-lateral offsets with small components of extension. The C-Line crosses the West Lafayette and Lafayette faults at grade, but it crosses the Reliez Valley fault near or at the Pleasant Hill Road aerial structure. Geologic data suggests that the Saklan fault likely consists of two strands that cross the Walnut Creek Aerial Guideway at Highway 680, each of which has an acute geometry that will result in contraction of the aerial structure. Possible west-up faulting may also produce contraction of the C-Line across these two strands of the Saklan fault. The 475-yr scenario earthquake (M6.8 to M7.1) on the CCSZ is expected to produce right-lateral displacements with cumulative probabilities of 50%, 84%, and 97.5% as given in Table 7.

The C-Line obliquely crosses the Concord fault about 1500 ft south of the Concord station, with a geometry that results in right-lateral offset and a large component of contraction. The rate of active creep on the Concord fault is substantial, accounting for nearly the entire long-term slip rate on the fault. The location of the fault at the C-Line crossing is well known based on prominent evidence of fault creep beneath the Systron Drive aerial structure, as well as nearby trenches and prominent geomorphic expression. There is possible evidence of recent, fault-related deformation of the aerial structure and adjacent track. The primary strand of the Concord fault crosses the C-Line at about MP 20.5, although secondary deformation extends from about MP 20.46 to MP 20.54 as a result of the oblique geometry of the crossing. The 475-yr scenario earthquake (M6.5 to M6.9) on the Concord fault is expected to produce displacements with cumulative probabilities of 50%, 84%, and 97.5% as given in Table 7. These displacements will likely be distributed across the fault zone from MP 20.46 to MP 20.54, with a maximum occurring at about MP 20.50. Aseismic creep will likely continue to deform the Systron Drive aerial structure at a rate of about 3.1 ± 0.5 mm/yr (0.12 ± 0.02 in/yr).

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7.0 RECOMMENDATIONS

We have the following recommendations with respect to the expected fault displacements of the C-Line.

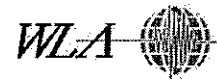
- The Hayward and Concord faults are known to be actively creeping faults, and individual faults within the CCSZ may experience creep. Creep on these faults will continue to deform the C-Line, and may require intermittent maintenance. We recommend that BART personnel monitor the fault crossing locations, as defined in this report, to identify possible damage to facilities.
- Faults within the CCSZ are judged to be potentially active. If ruptures on these strands are critical to retrofit design, we recommend additional geologic efforts (e.g., exploratory trenching) to define the activity of each fault strand. If one or all of the strands is proven inactive, or if ruptures are separated by long time intervals, the rupture hazard may be negligible. If a strand is proven active, mitigation measures should be considered using the expected displacements developed in this report.
- A large amount of uncertainty remains with respect to where the C-Line crosses specific faults within the CCSZ. For example, the exact location and width of the Reliez Valley fault at the C-Line is poorly defined. Although the C-Line likely crosses this fault within the stationing defined in this study, the fault may or may not traverse the Pleasant Hill Road aerial structure. Similarly, the location of the Lafayette fault at the C-Line is not well defined. If exact locations and widths are critical to BART retrofit efforts, we recommend completion of additional geologic analyses (e.g., exploratory geophysical surveys, drilling, or trenching) to better define the exact fault crossing locations and widths.
- Similarly, if retrofit designs require more detailed information on the relative amounts of vertical movement (i.e., the “sense of slip”) at any of the fault crossings, we recommend more detailed geologic characterization of the crossings to define the relative amounts of horizontal and vertical displacement.
- It is reasonable and prudent to operate under the assumption that the C-Line will experience fault rupture within the near future. We recommend that appropriate BART emergency response and maintenance personnel be fully aware of the possible rupture locations to facilitate post-earthquake recovery. We recommend conducting a field-based workshop for these personnel to understand the likely rupture scenarios, and the development of field “checklists” for emergency response personnel to use in the event of a fault rupture. Such checklists might include detailed maps of the likely

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rupture locations, access routes, and other nearby facilities that may affect response and recovery efforts.

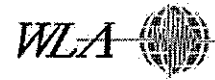
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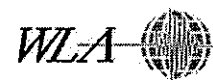
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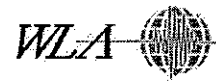
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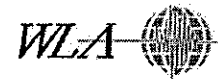
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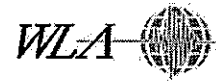
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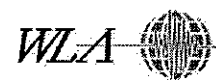
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51-2
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LETTER 51

Lynn Hiden, March 16, 2010.

Response 51-1

The comment refers to maps contained in a report, *Expected Fault Displacements along the BART Concord-Bay Point Line, Alameda and Contra Costa Counties, CA*, prepared in 2006 by William Lettis & Associates, Inc. for the Bay Area Rapid Transit (BART) District. The comment expresses concern regarding the potential for fault displacements in Lafayette. The information contained in the Lettis report provides detailed information on fault zones within the Plan Area, although it focuses on the BART alignment and does not discuss seismic effects in other areas. Chapter 3 shows revisions to the Draft EIR to include a discussion of the conclusions of the Lettis report. However, this information does not affect the conclusions in the Draft EIR.

Response 51-2

The comment is the BART report referred to in Comment 51-1. No response is required apart from the response to Comment 51-1, above.

CITY OF LAFAYETTE
DOWNTOWN LAFAYETTE SPECIFIC PLAN EIR
COMMENTS AND RESPONSES

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Larry Zulch
3277 Fairholm Court
Lafayette, CA 94549

March 16, 2010

Ann Meredith
Community Development Director
City of Lafayette
Lafayette, CA 94549

RE: Downtown Specific Plan and EIR

Dear Ms. Meredith, Mr. Chastain, and other members of the Planning Commission,

I have read large parts of the Draft EIR, Specific Plan, and General Plan. I'm impressed by the time, energy, and thoughtfulness represented in these documents.

I 52-1

I support the Downtown Specific Plan as an appropriate reflection of the General Plan and as an outline for Lafayette's future downtown. My experience tells me that a lack of planning is poor planning, that we need a plan or we will end up with less than we have now. Less quality of life, lesser schools, lesser property values – less of what makes Lafayette so special.

|

The current density of much of Lafayette is quite appropriate: enough to create community but not so high as to be crowded. Downtown is different; it already has enough density and enough issues that the goal should be to make it better, not to freeze it as is. Plus, to the extent that Lafayette is mandated to take on a share of regional housing needs, where better to accommodate that growth than downtown?

52-2

We embrace Lafayette's semi-rural character, but no one would call walking from Peet's to the Library semi-rural. Nor could they consider it a good experience. I've walked the length and breadth of the downtown study area a number of times, and as a cyclist, ridden it many more. Our downtown doesn't work very well, and I believe the reason is "through traffic" – the impact of those driving on our streets without an origin or a destination in downtown, and often, not in Lafayette at all.

Two letters would make this point: the LOS ratings for Mt. Diablo/Moraga and Pleasant Hill/Deer Hill intersections at 8 am on a weekday if the non-Lafayette through traffic were cut in half. That improvement would counter the impact from additional units contemplated by the Specific Plan many times over, even if they are all built. (Which they won't be, obviously. Those who think otherwise haven't tried to build anything in Lafayette.)

52-3

Of course, "through traffic" is a very difficult problem, which is why the General Plan, the Specific Plan, and the Draft EIR basically maintain that it is not solvable. But I'm not sure that is true. Just change the traffic light timing to 20 seconds of green every minute at Greenhills and Rancho View in the morning and the problem is solved for Pleasant Hill/Deer Hill, at least for half the day. (Not to mention the revenue enhancement opportunity!)

52-4

We can't depend on transportation alternatives to solve the problem. Of course we should do what we can, but getting people out of their cars is a regional, not local issue, and we don't have, nor do we want, the density necessary to make practical a comprehensive feeder system to existing transit.

Important as I believe through traffic is, the larger issue is our shared vision of what a downtown Lafayette can and should be. I'm proud of Lafayette. The first date my wife and I had was at Tourelle and now we have two children at Springhill Elementary. I bike Reliez and paddle my kayak in the Reservoir. We shop at Diablo Foods and Ace Hardware, drink coffee at Peet's, eat at Pizza Antica and Chow, use BART and go to the Library. But proud as I am of Lafayette, that pride does not extend to downtown.

What I read in the Specific Plan is a step toward a better downtown. Without such a vision, the issues we are already facing will gradually get worse. We need good design, additional amenities, and clear priorities. The implementation of the plan will require the planning and review processes to maintain their customary high standards for thoughtful design and minimal impact, and I have no doubt they will.

I'd like to see the EIR address the issue of through traffic with some data, not just call it an unsolvable problem made worse by anything we do and everything we don't do. What percentage of traffic in downtown does not have a downtown origin or destination? Or even a Lafayette origin or destination? We may find that significant steps toward traffic mitigation will be the greatest influence on the quality of our downtown. Whether those steps are changing the commute calculation of those who don't live in Lafayette, finding ways to speed the flow, or bypassing downtown somehow, I don't know.

What I do know is that we need a downtown with character and charm, one that is idiosyncratic and interesting, a place to go, a place to be, an area that meets both our needs and our desires. In short, we need a downtown that couldn't possibly be anywhere but Lafayette. We're not going to get that by saying no to every change to our beloved town, but by saying yes to what will work, by tackling the real problems with determination and clear vision, by demanding a future better than today.

I support the Draft EIR and the Specific Plan.

Regards,



Larry Zulch

52-5

52-6

52-7

LETTER 52

Larry Zulch, March 16, 2010.

Response 52-1

The comment expresses an opinion in support of the General Plan. The comment does not address the adequacy of the Draft EIR. The comment serves as an introduction to the comments that follow. No response is necessary.

Response 52-2

This comment states an opinion in support of the Plan. The commentor also expresses the opinion that the current density of Lafayette is appropriate. Finally, the commentor expresses the opinion that the through traffic in downtown Lafayette is what prevents it from working well. This comment reflects opinions about the Plan and does not address the adequacy of the Draft EIR. Therefore, no response is required.

Response 52-3

The comment states that the LOS of the Mount Diablo Boulevard/Moraga Road and Pleasant Hill Road/Deer Hill Road intersections would be greatly reduced without through traffic. A traffic analysis excluding a large portion of “non-Lafayette through traffic” at selected intersections, as requested in the comment, would be speculative, and would not represent the typical existing or projected conditions that must be analyzed according to CEQA Guidelines. The purpose of the Draft EIR is to evaluate the Plan’s impacts, not the relative impacts of other individual sources of traffic. To evaluate the Plan’s impacts in the context of future Cumulative traffic conditions, only the total accumulation of other future traffic is relevant, not portions of traffic from individual sources.

Response 52-4

The comment states that changes to traffic light timings would solve problems associated with through traffic. The comment suggests adjusting traffic

signal timing during the AM peak period at the Pleasant Hill Road intersections with Green Valley Drive and Rancho View Drive to allow only 20 seconds of green-signal time per minute (or one-third of the total signal cycle time) for Pleasant Hill Road traffic.

The *Lamorinda Action Plan Update* adopted in December 2009 (Lamorinda Action Plan) proposes metering traffic through a signalized intersection as a Traffic Management Strategy, and includes possible metering of through-traffic flow on southbound Pleasant Hill Road in the AM peak period as an example. According to the Lamorinda Action Plan, before implementing such a flow restriction, counts and analysis of intersections upstream and downstream of the constraining point should be conducted to determine their levels of service and the potential amount of traffic diversion. After implementation, counts and travel-time observations should be conducted in the corridor to determine whether the flow restriction is having the desired effect and without unnecessarily large negative impacts associated with queues at the metering signals.

The Lamorinda Action Plan indicates that an Action for Pleasant Hill Road “to encourage delay in order to discourage use of westbound/southbound traffic using Pleasant Hill Road to bypass the I-680/SR 24 interchange” would require the cooperation of TRANSPAC, the Central County’s Regional Transportation Planning Committee, to develop a Traffic Management Program. Additionally, “traffic management strategies considered for specific routes within Lamorinda shall be determined only by a vote of locally elected officials at a local, noticed public hearing” according to the Lamorinda Action Plan.

Because of the uncertainty of the approvals needed to implement metering of traffic through a signal on Pleasant Hill Road, which cannot be guaranteed, and potential secondary impacts, this measure would be considered infeasible as mitigation for the Plan. Additionally, the acceptable level of traffic flow restriction at such signal metering and the resulting effectiveness in mitigating traffic congestion on Pleasant Hill Road near the Plan Area has not been de-

terminated. The effect of this measure on traffic congestion at other locations in the Plan Area would probably be negligible.

Response 52-5

This comment expresses the opinion that residents do not want density to make a feeder system to existing transit. The commentor also expresses the opinion that implementation of the Plan would maintain high standards for thoughtful design and minimal impact. This comment does not address the adequacy of the Draft EIR. Therefore, no response is needed.

Response 52-6

The comment asks for additional information regarding through traffic. Please see response to Comment 4-16 for information regarding the percentage of traffic to/from Moraga on selected Lafayette roadways in the study area during peak hours.

Response 52-7

This comment serves as a closing remark for the preceding comments and expresses the commentor's opinion in support of the Plan and the Draft EIR. This comment does not address the adequacy of the Draft EIR. Therefore, no response is needed.

CITY OF LAFAYETTE
DOWNTOWN LAFAYETTE SPECIFIC PLAN EIR
COMMENTS AND RESPONSES

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**VI. COMMENT LETTERS RECEIVED AFTER THE CLOSE OF
THE COMMENT PERIOD**

CITY OF LAFAYETTE
DOWNTOWN LAFAYETTE SPECIFIC PLAN EIR
COMMENTS AND RESPONSES

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STATE OF CALIFORNIA
 GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
 STATE CLEARINGHOUSE AND PLANNING UNIT

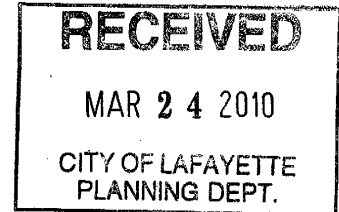
LETTER #53



ARNOLD SCHWARZENEGGER
 GOVERNOR
 March 18, 2010

CYNTHIA BRYANT
 DIRECTOR

Ann Merideth
 City of Lafayette
 3675 Mt. Diablo Boulevard, Suite 210
 Lafayette, CA 94549



Subject: Downtown Lafayette Specific Plan
 SCH#: 2009062056

Dear Ann Merideth:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on March 11, 2010, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

53-1

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
 Acting Director, State Clearinghouse

Enclosures
 cc: Resources Agency

**Document Details Report
State Clearinghouse Data Base**

LETTER #53

SCH# 2009062056
Project Title Downtown Lafayette Specific Plan
Lead Agency Lafayette, City of

Type EIR Draft EIR

Description The Plan envisions a mix of land uses throughout the Plan Area, including retail, office, residential, and civic uses in buildings of varying scales. The Plan contains goals, policies, and programs relating to sustainability, downtown character, land uses, circulation, natural resources, and public services and facilities, as well as specific capital improvements to improve public safety and enhance the character of the downtown.

Lead Agency Contact

Name Ann Merideth
Agency City of Lafayette
Phone 925-299-3218
email
Address 3675 Mt. Diablo Boulevard, Suite 210
City Lafayette **State** CA **Zip** 94549
Fax

Project Location

County Contra Costa
City Lafayette
Region
Lat / Long
Cross Streets
Parcel No.
Township **Range** **Section** **Base**

**53-1
cont.**

Proximity to:

Highways 24
Airports
Railways BART
Waterways Happy Valley, Lafayette, Las Trampas Creeks
Schools LAFSD, AUHSD
Land Use

Project Issues Air Quality; Archaeologic-Historic; Biological Resources; Economics/Jobs; Cumulative Effects; Flood Plain/Flooding; Growth Inducing; Landuse; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Solid Waste; Traffic/Circulation; Water Quality; Other Issues; Aesthetic/Visual; Drainage/Absorption; Forest Land/Fire Hazard; Geologic/Seismic; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Vegetation; Water Supply; Wetland/Riparian

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 3; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 4; Department of Housing and Community Development; Air Resources Board; Transportation Projects; Regional Water Quality Control Board, Region 2; Native American Heritage Commission; State Lands Commission

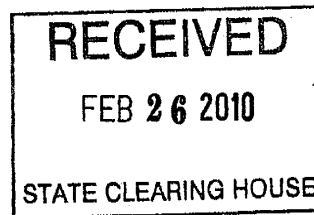
Date Received 01/26/2010 **Start of Review** 01/26/2010 **End of Review** 03/11/2010



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DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 622-5491
FAX (510) 286-5559
TTY 711

Clear
3-11-10
e



February 26, 2010

CCGEN018
SCH#2009062056

Ms. Ann Merideth
City of Lafayette
3675 Mt. Diablo Boulevard, Suite 210
Lafayette, CA 94549

Dear Ms. Merideth:

Downtown Lafayette Specific Plan- Environmental Impact Report

Thank you for including the California Department of Transportation (Department) in the environmental review process for the City of Lafayette Downtown Specific Plan Project. We have reviewed the Environmental Impact Report (EIR) and have the following comments to offer:

Traffic Safety

The mitigation measure TRAF-4 on page 4.13-50 proposes to re-stripe Deer Hill Road to add a third eastbound through lane, which approaches the intersection of Deer Hill Road and State Route 24 westbound ramps. This mitigation measure needs to study the potential impacts to the bicyclists and pedestrians at this location. There is an existing bicycle lane on Deer Hill Road at this intersection. This will eliminate an existing class 2 bicycle facility that provides connectivity to other bike lanes, creating a gap in the local bike network.

Traffic Impact Study

Please include in the Traffic Study the intersections of Acalanes Road at State Route 24 westbound ramps and Pleasant Hill Road at State Route 24 westbound ramps.

We would like to see the freeway mainline comparison table including the density and Level of Service (LOS) information on tables 4.13-12 and 4.13-16.

Mitigation measures should be identified where plan implementation is expected to have a significant LOS impact. Mitigation measures proposed should be fully discussed, including financing, scheduling, implementation responsibilities, and lead agency monitoring. The fair share of funding and responsibilities mentioned on page 4.13-24 do not adequately account for future development and over saturation on State Route 24.

"Caltrans improves mobility across California"

53-2

Ms. Ann Merideth/City of Lafayette
February 26, 2010
Page 2

Encroachment Permit

Any work or traffic control within the State right of way (ROW) requires an encroachment permit that is issued by the Department. Traffic-related mitigation measures will be incorporated into the construction plans during the encroachment permit process. See the following website link for more information:
<http://www.dot.ca.gov/hq/traffops/developserv/permits/>

To apply for an encroachment permit, submit a completed encroachment permit application, environmental documentation, and five (5) sets of plans which clearly indicate State ROW to the address at the top of this letterhead, marked ATTN: Michael Condie, Mail Stop #5E.

Should you have any questions regarding this letter, please call me at (510) 622-5491.

Sincerely,



LISA CARBONI
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

53-2
cont.

LETTER 53

Scott Morgan, Acting Director, State Clearinghouse. Governor's Office of Planning and Research. March 18, 2010.

Response 53-1

This comment states that the Draft EIR has complied with the State Clearinghouse review requirements. No response is necessary.

Response 53-2

The comment is a duplicate of Letter #1. Please see response to Letter #1, above.

CITY OF LAFAYETTE
DOWNTOWN LAFAYETTE SPECIFIC PLAN EIR
COMMENTS AND RESPONSES

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Lafayette School District

3477 School Street • P.O. Box 1029 • Lafayette, CA 94549
Telephone: (925) 927-3500 • Fax: (925) 284-1525
www.lafsd.k12.ca.us

March 9, 2010

To Whom It May Concern:

There are many emails and queries circulating throughout the community regarding the Downtown Specific Plan as it relates to our local school district. The following is information intended to clarify the impact that an increase in population would have on our K-8 schools.

54-1

- Our current student enrollment is 3,197 students, down from 3,545 students in the 1999-2000 school year. This means we have a capacity of 348 seats currently available to accommodate increased student enrollment.

54-2

- Filling an empty classroom with 27 additional students would generate \$170,000 in revenue. Even after accounting for the cost of a teacher for that class (the average annual cost for one teacher is \$66,000, including salary and benefits), there would be a net increase in revenue of at least \$100,000 that could be used to provide additional programming and support for our students.

54-3

- Increased student enrollment means additional revenue for our schools, regardless of parcel tax contribution.

54-4

- Because “the excess growth would come incrementally over the course of 20 years,” even if the growth exceeded the 350 seats currently available, the district has the ability to add classroom capacity through the installation of portable classrooms, or if necessary, reclaim district-owned school facilities that are currently being leased to a private school.

54-5

Please feel free to contact me if you need further information regarding the impact that an increase in population would have on our school district.

54-6

Sincerely,

Fred Brill, Ed.D.
Superintendent

LETTER 54

Fred Brill, Superintendent. Lafayette School District. March 9, 2010.

Response 54-1

The comment states that the purpose of the letter is to provide information that will clarify the impact that an increase in the population of the Plan Area would have on K-8 schools in the Lafayette School District. The comment is noted.

Response 54-2

The comment states that because current enrollment at Lafayette School District schools is down from the 1999-2000 school year level, there are currently 348 seats available to accommodate increased student enrollment. The comment also states that Lafayette School District enrollment for the 2009-2010 school year is 3,197 students. As shown in Chapter 3 of this Final EIR, pages 4.11-11 and 4.11-15 of the Draft EIR have been revised to reflect this new information on the availability of seats at Lafayette School District schools.

Response 54-3

The comment notes that filling an empty classroom with 27 students would generate \$170,000 in gross revenue for the Lafayette School District, or at least \$100,000 in net revenue that could be spent on additional programming and support for students after accounting for the average annual cost of a teacher. Additionally, the Draft EIR outlines a mitigation measure which requires the City to work with the school districts to determine if impact fees are required and to develop a nexus study to calculate and assess the fee as appropriate. Please also see responses to Comments 22-2 and 48-7, which address similar comments.

Response 54-4

The comment states that regardless of parcel tax contribution, increased student enrollment means additional revenue for the school district. The comment is noted.

Response 54-5

The comment points out that even if growth under the Plan resulted in enrollment above the number of seats currently available in Lafayette School District schools, because growth would come incrementally over the course of 20 years, increased enrollment could be accommodated through the installation of portable classrooms or, if necessary, by reclaiming district-owned school facilities now being leased to a private school. The comment is noted.

Response 54-6

The comment concludes the letter and invites the lead agency to contact the commentor, Fred Brill, Lafayette School District Superintendent, for further information regarding the impact that an increase in population would have on the school district. The comment is noted.

CITY OF LAFAYETTE
DOWNTOWN LAFAYETTE SPECIFIC PLAN EIR
COMMENTS AND RESPONSES

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April 6, 2010

TO: Planning Commission Chair, Chastain, and Commissioners,
FR: Karen Maggio
RE: School Funding Data

Because several members of the public have shared concerns about school funding with regard to the Downtown Specific Plan, I contacted the Acalanes District Office for more information on current funding and potential impacts resulting from an increase in multifamily housing development.

55-1

Chris Learned, Associate Superintendent for Acalanes School District, provided the following funding data to assist us in addressing development concerns:

Annual 2010 Parcel Tax

Acalanes School District \$189 per student
Lafayette School District \$300 per student

55-2

Annual 2010 State Revenue Limit

Acalanes School District \$5,746 per student

Students per Household (San Ramon figures)

Single family household 0.25
Multifamily household 0.07

Chris confirmed that the population of school age children is on a decline and that the annual "State Revenue Limit", now \$5,746, should have been \$7,321 per student this year. The combination of decreased funding as well as fewer enrolled students is an alarming trend. The State Revenue Limit per student remains the most important source of income for the school districts and enrollment is critical for that current level of revenue to continue. The parcel taxes, although important in narrowing the budget gaps are supplementary funding at best.

55-3

He also supplied the average student per household figure for San Ramon, his former district, and said that he felt the same was true for Lafayette as well. Unfortunately the same data for Lafayette is not yet available but assuming the numbers are similar, a hypothetical increase of 100 multifamily housing units might only increase the school age population by seven students. He felt that these numbers were statistically insignificant and would not impact the school district negatively or positively.

55-4

LETTER 55

Karen Maggio, Planning Commissioner. City of Lafayette. April 6, 2010.

Response 55-1

The comment serves as an introduction to the comments that follow. No response is necessary apart from the responses to the comments below.

Response 55-2

The comment provides information regarding funding for the Acalanes Union High School District schools. The comment is noted. This information does not change the conclusions of the EIR.

Response 55-3

The comment states that although parcel taxes help to bridge the shortfall in funding for schools, the State Revenue Limit per student remains the most important source of income for school districts. The comment is noted. This information does not change the conclusions of the EIR.

Response 55-4

The comment relays a statement from Chris Learned, Associate Superintendent for the Acalanes School District, which states that 100 multi-family units might only increase the school-aged population by seven students and that the associated impact would be neither negative nor positive. The comment is noted. This information does not change the conclusions of the EIR.

VII. ORAL COMMENTS

CITY OF LAFAYETTE
DOWNTOWN LAFAYETTE SPECIFIC PLAN EIR
COMMENTS AND RESPONSES

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**City of Lafayette
Planning Commission
Meeting Minutes**

Monday, March 1, 2010 • 7:00 pm

Lafayette Library and Learning Center • 3491 Mount Diablo Boulevard • Community Hall

CALL TO ORDER

Chair Chastain called the meeting to order at 7:00 pm.

ROLL CALL

Present: Chair Chastain; Vice-Chair Curtin-Tinley; Commissioners Maggio, Mitchell, Lovitt, Ateljevich, and Humann

Absent: None

Staff: Ann Merideth, Community Development Director; Niroop Srivatsa, Planning & Building Services Manager

ADOPTION OF AGENDA

Commissioner Ateljevich moved to adopt the agenda as written. Commissioner Lovitt seconded the motion which was carried by unanimous consent (7-0-0).

PUBLIC COMMENTS

None

CONSENT CALENDAR

Commissioners Mitchell and Maggio removed Items 5A and 5B.

GP03-09 CITY OF LAFAYETTE (APPLICANT): Amending the Land Use Chapter of the Lafayette General Plan to create a Senior Housing Overlay district. **ZT05-09 INCLUSIONARY HOUSING, CITY OF**

LAFAYETTE (APPLICANT): City-initiated Zoning Text amendment to Title 6 of the Lafayette Municipal Code, creating a new part entitled "Senior Housing Overlay," creating a new residential use category when creating and/or constructing senior residential housing development in Lafayette.

Recommendation: Continue the matter, without discussion, to the regularly scheduled meeting of April 5, 2010.

Project Planner: Glenda Warmoth, Tel. (925)299-3257 • gwarmoth@lovelafayette.org

HDP12-09 HOLLMAN BOLOGNA ARCHITECTURE (APPLICANT), MELCOR HOMES (OWNER), LR-5

ZONING: Request for a Phase I Hillside Development Permit pursuant to Section 6-2005 (a)(8) of the Lafayette Municipal Code (LMC) for siting and massing determination, (2) Exception for Development within a Class II Ridgeline Setback, pursuant to Section 6-2027 LMC, and (3) Exception to exceed the height limitation based on the 15° declination requirement to construct a new ~5,100 sq. ft., two-story single-family residence with a maximum ridge height of ~32 ft. within the Hillside Overlay District and within a Class II Protected Ridgeline Setback, located at 20 Reliez Valley Court. APN 167-050-011. Once house siting and massing have been established by the Planning Commission, the applicant will submit full design plans for a Phase II Hillside Development Permit and public notification will be provided again at that time. Only establishment of an appropriate house site and mass is under consideration at this time

Recommendation: Continue, without discussion, to the Planning Commission meeting of March 15, 2010 to allow the applicant additional time to respond to the Commission's comments.

Project Planner: Lindy Chan, Tel.(925) 299-3202 • lchan@lovelafayette.org

56-1

1 Commissioner Ateljevich moved to adopt the Consent Calendar. The motion was seconded by
2 Commissioner Lovitt which carried by unanimous consent (7-0-0).

3
4 **JANUARY 13, 2010 DRAFT MEETING MINUTES**

5
6 Commission Maggio referred to page 6, line 51, to clarify about what was said about parking. She said the
7 solution is actually free lots further out, but pay lots further in. If you want a free lot, you have to walk.

8
9 Commissioner Mitchell referred to page 9, lines 13-14. He said he would like to retract what he said.

10
11 **JANUARY 19, 2010 DRAFT MEETING MINUTES**

12
13 Commissioner Mitchell referred to page 2, line 16. He said it should say the minimum is 15 percent not 40
14 percent, for affordability.

15
16 Commissioner Maggio referred to page 8, lines 29-30. She said that instead of reading “through the
17 recent review the Commission has often reverted to the General Plan as it relates to reducing districts
18 and maximum density”, it should read as “existing districts.”

19
20 Commissioner Mitchell moved to approve Items 5A and 5B, as amended. The motion was seconded by
21 Commissioner Maggio which carried by unanimous consent (7-0-0).

22
23 **CONTINUED PUBLIC HEARINGS**

24
25 None

26
27 **NEW PUBLIC HEARINGS**

28
29 **DOWNTOWN SPECIFIC PLAN – DOWNTOWN DRAFT EIR**

30 **Recommendation:** Conduct the public hearing, and provide comments and questions for the Final EIR.

31 **Project Planner:** Ann Merideth, Tel. (925)299-3218 • amerideth@ci.lafayette.ca.us

32
33 Ann Merideth, Community Development Director, said that this is the first of two hearings or the first night
34 of the public hearing on the Draft EIR. The purpose is twofold. First, it provides another venue for the public
35 to provide comments. Second, it provides an opportunity for the Planning Commission to ask questions
36 about the process, the product and CEQA, or to ask questions they would like to see responded to in the
37 Final EIR. She introduced the consulting team: Steve Noack, Principal-in-Charge, from Design, Community
38 & Environment; Alexis Lynch, Project Manager, from Design, Community & Environment; and Rich
39 Haygood, Project Manager, from TJKM, traffic consultants.

40
41 Steve Noack made a PowerPoint presentation. He first provided an overview of what is an EIR. CEQA
42 requires preparation of an EIR for certain projects. An EIR is an informational document that is considered
43 by public agencies before approval or disapproval of a project. The purpose of an EIR is to provide detailed
44 information to agencies and the public about the effects a project is likely to have on the environment. An
45 EIR will also list ways to minimize significant effects as well as discuss alternatives to the project.

46
47 Mr. Noack continued with the list of environmental issues discussed in the EIR. The EIR does not address
48 agricultural lands or forest lands or mineral resources because they do not apply to the Plan. Otherwise,
49 they have covered all the other environmental issues that could potentially arise over the 20-year horizon of
50 the Plan.

51
52 Mr. Noack continued with the EIR process. We are now in the middle of the public review period. This
53 follows the Notice of Preparation and scoping. We did the environmental analysis and prepared the Draft
54 EIR. We are in the 45-day public review period. The close of that period is March 16th. Once the public
55 period closes, we will prepare the Final EIR. This will include responses to all comments and, where
56 appropriate, any modifications to the text of the Draft EIR. The Draft EIR and Final EIR then become the

56-1
cont.

1 EIR. We will go through the public hearing process at the Planning Commission and finally at the City
2 Council where the EIR will be certified before the adoption of a Specific Plan. There are many opportunities
3 for public input.

4
5 Commissioner Lovitt asked if the Planning Commission will make a recommendation on certification. Ms.
6 Merideth replied yes.

7
8 Mr. Noack continued that this is a planning-level document, which is different from a project-level
9 document. The EIR looks at the buildout of the Specific Plan over a 20-year period. The project description
10 is really a summary of the Plan itself, including all the contents listed in the Table of Contents, proposed
11 land uses, development standards, circulation plans, and capital improvements. We are looking at a
12 programmatic-level document which is very different than a project-level document, which looks at specific
13 impacts that are predicted to occur over a short horizon of time during project construction. This is a very
14 important distinction. It is important to note that we are looking at a 20-year horizon; we are not looking at
15 tomorrow. Over 20 years, many things can happen. We have estimated the buildout potential of this Plan
16 over that 20-year horizon. It represents the number of housing units and the amount of commercial
17 development and the amount of residential and commercial populations that are reasonably foreseeable in
18 that 20-year span of the Plan. We base this on an assumption that up to 80 percent of Plan area could be
19 developed over the Plan's horizon. Again, there are many factors that will bear on what will occur. Certainly
20 the elephant in the room is the economic situation, availability of money, and the demand for residential
21 development and new commercial space. While we have taken a conservative estimate, we have looked at
22 the higher numbers as to what could occur. What will actually occur will vary over the life of the Plan. It is
23 also important to note that each development project that will occur under this Plan will undergo specific
24 environmental analysis.

25
26 Mr. Noack said that the buildout is based on 80 percent of the Plan. We looked at key development sites
27 and factored in setbacks and residential densities in the Plan to estimate the number of units and square
28 footage that could occur. As a result, the buildout projects would be up to 1,700 residential units supported
29 by 360,000 square feet of commercial. He concluded his presentation, and said that detailed responses will
30 be made in the Final EIR to comments.

31
32 Chair Chastain asked if there were any questions about process.

33
34 Commissioner Ateljevich asked if they looked at development over the past 20 years. She said she
35 doubted if we developed 80 percent over the past 20 years. Mr. Noack responded that they did not
36 calculate how much development has occurred over the last 20 years. In terms of process, they begin with
37 when the Notice of Preparation was issued and what will occur with the implementation of this Plan over
38 the long-term.

39
40 Commissioner Lovitt asked when we get to the point of recommending about certification, does that
41 certification limit the City's ability in any way in formulating a recommended a Final Downtown Plan? Ms.
42 Merideth responded no. It does not have to be the Plan that was developed in September. It does not have
43 to be any of the alternatives. As long as it fits under the umbrella of the EIR in terms of what is described as
44 the worst-case scenario, then the Plan can be whatever the Planning Commission and City Council
45 ultimately develop.

46
47 Commissioner Lovitt asked if we end up proposing something more impactful, does that require a
48 statement or finding of some kind? Ms. Merideth responded that if the ultimate Plan is greater than the
49 WRT Plan, then additional environmental analysis would be required. Commissioner Lovitt asked then we
50 would not just make a statement, and Ms. Merideth responded no. Commissioner Lovitt asked what if we
51 ended up with things that were even less impactful than what was studied, less than the General Plan? Ms.
52 Merideth responded that it would be presumed that it was covered under the umbrella of the EIR.

53
54 Commissioner Ateljevich said in an EIR that is not a program EIR, we have to do all the implementations
55 that are certified. In this case, are all the mitigations required over the 20 years? How does that calculate?
56 What if our impacts are much less, or if the rate of development is much slower? How do we know from this

56-1
cont.

1 EIR what mitigations will be required because a new Plan will need new EIR work? Ms. Merideth
2 responded with a general statement about CEQA. CEQA does not require the City to do anything. What it
3 does is identify an impact and then identify ways that impact could be mitigated. Going back to a project,
4 say an office building, and mitigations are identified. The City can look at those mitigations and decide
5 whether to do them or not. If it decides not to do the mitigation, then it has to do the findings about why they
6 are not doing them. CEQA does not require anything; it provides the information. There is a process that
7 you have to follow. In terms of a programmatic EIR, once you have a Final Plan developed, then you would
8 look at the mitigation measures that are in here and compare them. You would make the findings on how
9 those mitigation measures are ultimately implemented, or they are built in over the life of the 20-years. It is
10 the same thing what you did for the EIR for the General Plan; it is very similar. The General Plan EIR
11 identified mitigation measures that are either incorporated into the Plan or that you need to keep in mind as
12 the Plan is implemented.

13
14 Commissioner Mitchell said you mentioned findings might have to made if we choose not to implement
15 mitigations, is that correct? What might be an example of that? Ms. Merideth responded CEQA says you
16 should identify the social, economic, environmental, or other reasons why the City decides not to do a
17 particular mitigation. For example, if the mitigation was so expensive that it could not be done, then you
18 would have to document why it is so expensive, why there are no funds to do it. Or if there were a social
19 reason, like eliminating a senior housing project.

20
21 Commissioner Mitchell said the EIR has a number of mitigation measures. When we certify the document,
22 are we saying the mitigations are sufficient to mitigate the impact down to a less than significant level?
23 When we certify, does it mean that we agree with the mitigation measure? Ms. Merideth said no. Certify
24 means that the EIR meets the definition of adequacy by CEQA; there is an adequate amount of information
25 for you to make a decision on a project.

26
27 Commissioner Mitchell asked if we do not agree with the mitigation measure, should we address that now?
28 Ms. Merideth responded that if you have that concern or if you have other suggestions, then you should
29 express that now so it can be responded to in the Final EIR.

30
31 Commissioner Lovitt said if there is an objection to a mitigation, if we feel it is not adequate, and it goes for
32 consideration. Then it comes back the same way, are we overridden? Steve Noack responded that the
33 Planning Commission would have the discretion during the public hearing on the EIR to vote on all
34 mitigation measures. It is very important to note that the EIR is very focused on the thresholds of
35 significance, and those are clearly defined in each of the technical areas. So if there is different mitigation
36 or additional mitigation, it has to be clearly tied to that threshold. There needs to be a linkage between the
37 conclusion of significance and the mitigation to offset the level of impact. He has seen conditions of
38 approval on a project that go beyond mitigating to some other level of improvement. So understanding the
39 difference between mitigation and general conditions is important. That applies more to a project, but it is
40 important here as well.

41
42 Commissioner Lovitt gave the example of widening the street to add another lane, and we decide to add
43 another eight lanes. You look at it as a comment, and you do not implement it because you do not agree
44 with it. Where does that leave us in developing a final Plan? Mr. Noack responded that is a good example.
45 The EIR looks at traffic improvements and makes a note whether the improvements are feasible due to
46 right-of-way or other impacts that the widening may cause. The EIR may determine that a significant impact
47 cannot be mitigated. If we were to recommend a mitigation that the Commission disagrees with, the
48 Commission has the discretion to take that recommended improvement, determine that it is not feasible,
49 and then adopt overriding considerations as part of the approval process. Commissioner Lovitt said so the
50 overriding consideration would be we could adopt what we wanted? Mr. Noack said correct. Chair Chastain
51 said that would be part of the approval process, not the EIR.

52
53 Chair Chastain said if we disagree with mitigations, it does not matter. There are thresholds, and we can
54 disagree with it in the Plan. Commissioner Lovitt said whatever Plan we come up with can disagree as long
55 as it does not exceed impact thresholds. Is that correct? You cannot make it worse? Mr. Noack replied that
56 is correct.

56-1
cont.

1 Chair Chastain opened the hearing for public comments.

56-1
cont.

2
3 Guy Atwood said he would save his comments for a later meeting, but he had one question. There was a
4 statement that the Plan considers 80 percent buildout during the life of the Plan. If the number is 1,765
5 housing units and however many population, is that number 100 percent and you calculated 80 percent to
6 be the impact, or is that number 80 percent of some other number? Mr. Noack replied that number
7 represents the 80 percent factor. We do not do 100 percent. We look at maximum potential buildout at 80
8 percent, never the 100 percent number. Mr. Atwood said the 100 percent number would 20 percent higher?
9 Mr. Noack replied correct.

56-2

10
11 Eliot Hudson said since this meeting seems to be about process, he will make comments about that. One
12 of the overriding concerns of the citizens of Lafayette is maintaining our small town character. He is not
13 sure how you address that. Part of it is aesthetic and how you address aesthetics. He has seen the report
14 with respect to addressing views, and they are too narrow in what they look at. But he would like to submit
15 whether or not this report can address more what is the aesthetic of small town. What is missing in the
16 report is how to assess that at a human level. So he would ask whether that could be addressed.

56-3

17
18 Commissioner Mitchell moved to close the public hearing. Vice-Chair Curtin-Tinley seconded the motion,
19 which carried by unanimous consent (7-0-0). Chair Chastain closed the public hearing.

20
21 Chair Chastain said he wanted to start at the beginning of the document and work their way through. He
22 hoped they could get half-way through. We will take questions and comments as we move chapter by
23 chapter, and at the next meeting we will continue with the remaining ones. We can go back and offer
24 comments and questions on earlier parts. He asked Vice-Chair Curtin-Tinley to give some context about
25 what we are doing relative to the Plan.

26
27 Vice-Chair Curtin-Tinley said sometimes it is really difficult to understand how CEQA interplays with the
28 project that is ultimately approved. As stated before, what we have before us is a Draft Environmental
29 Impact Report. Now we have the 45-day public comment period, comments will be received, and the
30 consultant will prepare responses to comments. The comments and responses make up the Final EIR.
31 Together these two volumes make up the EIR. The information is what we consider in making a decision
32 about a project. The project that might be recommended by the Commission is not necessarily the
33 proposed project. That is sometimes a difficult concept to understand. We had to pick a proposal at some
34 point in time so the environmental analysis could begin. What this document does is provide information
35 about that project; it is a research document, no more. Certifying this EIR does not mean we are approving
36 the proposed project. It analyses the potential impacts that could happen. If we are inclined to approve a
37 project, we need to approve a project that is at that baseline or under it. If we wanted to go above it, we
38 would have to do additional environmental analysis. Certifying this document does not mean we will
39 approve any project; it says that this document was prepared in compliance with CEQA. This document is
40 legal document, so it addresses all the environmental sections. It does not address the kind of questions
41 raised by Mr. Hudson – what is the planning behind the project. The land use section addresses, to the
42 extent allowed by CEQA, the small town character of Lafayette. But that may not be just an environmental
43 issue. It may be a planning issue, and you have to put the issues together at the Planning Commission to
44 make a decision on a project.

56-4

45
46 Vice-Chair Curtin-Tinley continued about another issue. You may not agree with the information in the
47 document. You might not like what it says. You might not like that a lot of our traffic is caused by outside
48 jurisdictions, not Lafayette. What are we going to do with that, and how are we going to mitigate it. This is
49 the basis for us. It is not here for us to criticize the document. It is just information. Another important factor
50 is that this a program EIR. So let us assume we recommend all the mitigations be implemented on a
51 project when it comes forward, and the Council does the same. That does not mean we do not get a
52 second bite of the apple because when a project comes to us, we will compare it, or staff will compare it, to
53 the EIR to make sure it was adequately analyzed. That is when you get another look at the mitigation
54 measures, because they may not apply to a project. This is not the last opportunity, but not to say we
55 should not do a good job at this opportunity. It is not your last chance. She said she hopes that helps. It is
56 easier for her because she practices this day out and day in. It is extremely complicated.

1 Commissioner Mitchell asked about mitigation. The document measures stuff, like traffic. They sit there and
 2 measure stuff, and it is accurate. And then they propose mitigations. It makes you wonder whether it will
 3 really work or not. What level of comfort do we need to have with the mitigation measures proposed? We
 4 say it seems logical so we will go with it and deal with it as it arises? Where do we need to stand on the
 5 mitigations? Vice-Chair Curtin-Tinley responded that it has to have a logical basis. Traffic is the harder one,
 6 because it is not so finite, as say air quality. We do not know what specific projects we will encounter.
 7 Again this is a program level document. When a specific project comes up and we can monitor it, we can
 8 say is that mitigation working, or do we need to do more, or is it effective.

9
 10 Commissioner Mitchell asked that if the EIR is certified, it does not mean we have to implement all the
 11 mitigation measures exactly as described in here? When it comes time to implement, it might be
 12 implemented differently? Vice-Chair Curtin-Tinley responded that is correct. You just cannot go out of the
 13 box. You have to have the nexus that is connected to the project. If a project only has three more trips, you
 14 are not going to require a new light. There is no nexus.

15
 16 Commissioner Lovitt said take that to the next extreme in terms of limiting or not limiting future actions of
 17 the City. All the mitigations do not have to be done before development starts. The Draft EIR contemplates
 18 they would be done at some point as development progresses. We get to a point where we say that a road
 19 can handle no further development without the road widening recommended in the EIR. Can we turn down
 20 a project based on that? Can we say we do not have the money to widen the road, nobody has the money
 21 to widen the road, so you do not have a project? Vice-Chair Curtin-Tinley responded that it depends on
 22 what decision you made originally. If we make a recommendation to Council, and Council approves a
 23 statement of overriding considerations on traffic, then you can approve a project that exceeds this
 24 unacceptable Level of Service to move forward.

25
 26 Commissioner Lovitt asked if we can turn down a project because we cannot implement the mitigation?
 27 Commissioner Ateljevich says the EIR says we cannot issue a building permit where the infrastructure is
 28 not adequate. Chair Chastain asked to talk generally about the process.

29
 30 Mr. Noack added that part of the final review process is the adoption of a mitigation monitoring and
 31 reporting plan that includes a listing of all mitigation measures, who is responsible for implementing, and
 32 the timing for implementation. Because this is a 20-year Plan, that timing will vary depending on what the
 33 mitigation is. Is it dependent on the collection of funds, other agencies, joining together for improvements.
 34 All that will be detailed in the mitigation monitoring and reporting plan that will be approved as part of the
 35 project.

36
 37 Chair Chastain said there is an initial list of questions that were submitted by the Planning Commission and
 38 that are part of the public record. That process can continue between now and the end of this period. We
 39 do not need to refer to them tonight because they are part of the public record.

40
 41 Vice-Chair Curtin-Tinley asked if you want to go chapter by chapter with the traffic consultant here? Is there
 42 a need to ask questions of him tonight, or will he be returning in two weeks? Rich Haygood responded he
 43 would not be available in two weeks. He is the project manager, but he might be able to have someone
 44 else attend. He thought it would be great if they could get to it this evening so that he could answer
 45 questions.

46
 47 Chair Chastain said he thought that was a great idea, and they would see if they could accommodate that.
 48 He said he thought we could skip the Introduction. He began with Chapter 2. Report Summary, and asked
 49 for questions and comments. Commissioner Ateljevich indicated she wanted to go through the table. Vice-
 50 Chair Curtin-Tinley said the table is summary of what is in each chapter. She recommended that they go
 51 through each chapter and the impacts and mitigations in that chapter. Chair Chastain agreed.
 52 Commissioner Mitchell said he agreed with Commissioner Ateljevich to go through the table. Chair
 53 Chastain said that was what we would do then. He started with the table on page 2-4.

54
 55 Commissioner Maggio referred to aesthetics. She wanted a discussion of why there were no significant
 56 project impacts with regards to aesthetics.

56-4
 cont.

56-5

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	<p>Commissioner Ateljevich said there is some discussion of that in the chapter itself. Whether one agrees with it or not is another question. She asked are they only comparing the Project with the No Project? How do you arrive that there is no impact on the aesthetics of the town? Mr. Noack said he would direct them to the thresholds of significance for aesthetics, and that is what they used to reach their conclusion.</p> <p>Commissioner Ateljevich asked what is the threshold of significance for aesthetics? Mr. Noack replied they are listed at the beginning of the chapter. Vice-Chair Curtin-Tinley said they are on page 4.1-14. Ms. Merideth said this is a good example of a question you should ask to be addressed in the Final EIR because it needs some discussion and clarification for you. It was on your initial list. One of the Planning Commissioners has already identified it, so it will be in the Final EIR.</p> <p>Commissioner Ateljevich referred to page 2-5, third bullet. She said there is a mitigation for tiered plantings of trees, which would be inconsistent with the aesthetic embodied in <i>Trees of Lafayette</i>. Consider the type of thinking we have had about landscaping, such as redwood trees are generally good next to creeks or where there is moist air. But they are not particularly good in dry situations. They require irrigation. They are a very tall tree, and that would create a skyline of very pointy trees in a town that has wanted to emphasize the rounded headed trees, the oak look. She thought that it was inconsistent with the philosophy of Lafayette. Deodar cedar is very fire-prone. So those types of trees do not have a form that is consistent with a skyline that we want to develop in Lafayette. It would be a philosophical point.</p> <p>Commissioner Lovitt referred to page 2-5, second bullet regarding putting warning labels on buildings and leases. We had the law passed in California requiring every building put a decal on every door warning of the risks from chemicals used in the building, which he hopes everyone would agree are totally meaningless and probably unwarranted. This seems to be a far more serious situation, the proximity to the freeway. He is not convinced that putting a warning label on a lease is really sufficient to advise a knowing resident of those effects and what they should do about it.</p> <p>Commissioner Mitchell also had a question about that. It talks about 250 feet, and maybe we could get a map showing the line.</p> <p>Vice-Chair Curtin-Tinley said it was not clear if that 250 feet came out of the Draft Bay Area Air Quality Management District guidelines or if it is coming from something else. If it came out of the Draft guidelines, it is only a draft. Do we need to rely on the Draft? She said she understood that they are being substantially revised. If that 250 foot or 500 foot is removed, what do we do at that point?</p> <p>Commissioner Ateljevich said on cultural she had a comment. There is a list that Knapp Architects constructed for you. She would like you to consider adding the Forge to the list. It has been there at least 50 years, and it was an active forge up to 45 years ago. It is more symbolic of early California than other buildings in town. It sets the character of that area as something we want to maintain. It would be an important addition.</p> <p>Commissioner Ateljevich said there is a “wonderful” noise mitigation. She referred to NOI-1 on page 2-8 where all outdoor eating fronting on Moraga Road, within 100 feet of Moraga Road, 24, Mount Diablo Boulevard, has to have a sound barrier or structure between it and the roadway. Chair Chastain asked if she would like a clarification? She said she thinks it should be rethought.</p> <p>Commissioner Mitchell said under land use, it is the same question we might want to have a discussion about the impact or the lack thereof. Commissioner Ateljevich said we might not ever implement that one no matter what.</p> <p>Commissioner Lovitt said PH-1 really speaks to the question that he asked earlier. Commissioner Ateljevich asked if there are thresholds to go along with the various impacts and what triggers what and when? Nothing is ever going to happen all in one lump. Commissioner Lovitt continued that the EIR is saying we can condition building permits based on availability of infrastructure. Is that correct? Ms. Merideth said you can do that now. You can do that for any project. If you can make a nexus between a project and a lack of services, you can address that. It is something that the City is allowed to do.</p>	<p>56-5 cont.</p> <p>56-6</p> <p>56-7</p> <p>56-8</p> <p>56-9</p> <p>56-10</p> <p>56-11</p> <p>56-12</p> <p>56-13</p> <p>56-14</p>
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1	Commissioner Ateljevich said that right now the time for response by fire, it is lower than what our General		56-15
2	Plan said it should be. A project comes in. What do they do, pay for part of a fire engine? She said she		
3	does not understand how the funds get allocated from the impact fees and what triggers what?		
4			
5	Commissioner Mitchell said his question on that is the public services can be offset by fees, but the		56-16
6	infrastructure is a slightly different matter. He would like some clarity on that.		
7			56-17
8	Commissioner Maggio said she would as well. The conditioning, the impact fees, and what the process		
9	would be, what is included. Is it roads, services? Would you, in fact, get a cumulative number of projects		
10	paying a percentage and holding the funds until projects are completed? If we could get a clearer picture of		
11	that process. Commissioner Ateljevich added schools, fire, traffic.		
12			56-18
13	Commissioner Ateljevich asked if you would be answering the Department of Transportation? The		
14	consultants indicated they would.		
15			56-19
16	Commissioner Lovitt asked if they settled TRAF-1, striping on Oak Hill? Chair Chastain we are not settling		
17	anything; do you have questions about it? Commissioner Lovitt asked whether there was already a		
18	question about it? The question would be one of feasibility and aesthetic desirability. Chair Chastain		
19	clarified that the question is the relationship between the mitigation and other issues? Given this mitigation		
20	measure, if it is assumes not to be an option based on other factors, what does that mean? Commissioner		
21	Lovitt agreed.		
22			56-20
23	Commissioner Mitchell said he had a parallel question on TRAF-2. It seems that the mitigation measure		
24	calls for moving into the park area. What would be the ramifications? Commissioner Ateljevich said that is		
25	why she asked for drawings of all those to see that.		
26			56-21
27	Commissioner Maggio said she had a comment about TRAF-2, -3 and -4. These were all items that were		
28	considered early on in MORTRAC. One of the things that came up is that increasing the LOS on Moraga		
29	Road would increase the LOS in the town of Moraga and impact their ability to develop as well. It does not		
30	just affect Lafayette. We have to look at what increasing the LOS on Moraga Road means to neighboring		
31	communities, and thereby increasing our traffic in coming through Lafayette to Moraga.		
32			56-22
33	Commissioner Lovitt questioned if, on TRAF-7, installing a signal at Deer Hill and Oak Hill is semi-rural?		
34			56-23
35	Vice-Chair Curtin-Tinley asked if there is any way to determine, referring specifically to Moraga Road, how		
36	much traffic is generated by Moraga and how much by Lafayette?		
37			56-24
38	Commissioner Ateljevich said there are an unusual number of impacts that are significant and unavoidable.		
39			56-25
40	Vice-Chair Curtin-Tinley said she would ask the same question with respect to TRAF-10, and is there a		
41	way to determine how much traffic is generated from outside Lafayette? Commissioner Humann added, not		
42	just currently, but what could be expected?		
43			56-26
44	Commissioner Lovitt questioned TRAF-12 and if signs pointing at parking facilities would do anything to		
45	mitigate the increased localized traffic?		
46			56-27
47	Chair Chastain said they are through with the chart. He said they are on with questions and comments		
48	about <u>Chapter 3. Project Description</u> .		
49			56-27
50	Vice-Chair Curtin-Tinley asked for an oral presentation on Tables 3-1 and 3-2 and the assumptions in the		
51	General Plan and the assumptions in the Specific Plan. Alexis Lynch referred to Table 3-1. It is putting side		
52	by side the existing Plan Area conditions, the projections allowed under the Specific Plan, and the		
53	projections allowed under the General Plan. It compares those Plan Area numbers with citywide numbers		
54	as a whole. Table 3-2 takes a closer look at the General Plan projections with the Specific Plan projections		
55	for just the Plan Area. At the top of page 3-21 and other pages, it states why the Specific Plan projections		
56	are so much higher than the General Plan projections. The first of those reasons is that the General Plan		

1 numbers are based on the Housing Element numbers. The assumptions for framing the Housing Element
 2 numbers are coming from a different perspective than for the Specific Plan EIR. The Specific Plan EIR is
 3 trying to, as we discussed before, take a more environmentally conservative look and casting the widest
 4 umbrella that is reasonable. They looked at smaller dwelling units, sizes. They looked at 1,000 square feet
 5 per dwelling unit for the Specific Plan numbers while for the Housing Element numbers you are looking at is
 6 1,200 square feet. So there will be lower housing dwelling unit numbers because you are looking at larger
 7 unit size. Another difference is that they looked at surface parking which reduces the development potential
 8 on a site, while we looked at more urban podium parking to assume a more intensive development so that
 9 they were utilizing a greater environmental impact on the site. The Housing Element is coming from a
 10 different point of view than an EIR.

56-27
cont.

11
 12 Commissioner Ateljevich asked is that not from the 2002 Housing Element? Don't we have a more recent
 13 one? Ms. Lynch responded that is another part as well. We are looking at different numbers and different
 14 sites. We used the sites from Fehr& Peers from the Draft Plan, and we looked at different development
 15 sites. We started in different places.

16
 17 Commissioner Ateljevich asked are they assuming we are going to do podium parking for the whole thing?
 18 Ms. Lynch responded that is just for analytical purposes for the EIR to establish a parameter to run the
 19 calculations. That is not to say that is what would be allowed on any given site. It is more that we needed to
 20 take a theoretical look for analytical purposes. We had to come up with a prototypical development for each
 21 site with some kind of parameters to enter to get our outputs. Commissioner Ateljevich said she is not sure
 22 we want to make everything smaller. Ms. Lynch said we were looking at the lower end of a reasonable unit
 23 type. It might be lower than what is typical for Lafayette.

24
 25 Chair Chastain referred to page 3-17 and 3-18. In the paragraph at the top of 3-18, you say that given the
 26 historic rate of growth in Lafayette, the high cost of land, parcel size; it is unlikely the buildout numbers
 27 would be fully realized. He would like to know the delta between what that might mean and what would be
 28 considered worse case scenario. Part of that might be consideration of unit size. He would like to
 29 understand what the paragraph actually means. There should some reasonable understanding of the delta
 30 between those two. Commissioner Ateljevich said their numbers are quite different from BAE's numbers.
 31 What you after is what is more realistic. Chair Chastain said he wants to know what that paragraph means.

56-28

32
 33 Vice-Chair Curtin-Tinley said she had a follow-up question. The buildout under the General Plan was based
 34 on the figures in the Housing Element. The Specific Plan, or the proposed Project, is based on land use
 35 intensity and the maximum, the 80 percent, of it. If we were to go back to the General Plan, and were to
 36 compare the housing projections with the land use projections, what would that delta be? Ms. Lynch said
 37 she could not answer the first question, but she could confirm that we started with a completely different
 38 methodology for the Plan using traffic opportunity sites from the previous Plan and ran a development
 39 potential based on this Plan. That is completely different than the methodology used for the General Plan
 40 Housing Element. We continued through the General Plan assumptions in the alternatives analysis where
 41 we did the General Plan No-Project alternative and did update the General Plan numbers for that
 42 alternative. That is another place taking a different set of numbers.

56-29

43
 44 Commissioner Mitchell referred to page 3-17 with regards to the creeks. It is talking about the Happy Valley
 45 Creek, Lafayette Creek confluence. Are all the sections of those creeks within the RDA being studied?
 46 There was a section down near the BART station where there was already some preliminary study by the
 47 City Council. He wondered if it were included?

56-30

48
 49 Chair Chastain continued with Chapter 4. Environmental Evaluation beginning with 4.1. Aesthetics.

50
 51 Commissioner Ateljevich referred to Table 4.1.-1 on page 4.1-2, General Plan policies relevant to
 52 aesthetics. You mentioned LU-7, which is the goal, and one of the polices, LU-7.1 and 7.1.1. But there are
 53 -2, -3, -4, and -5, all of which deal fairly directly with aesthetics. Those sections call for the commercial
 54 design guidelines. It those sections of the General Plan that call for pedestrian amenities, for the
 55 preservation of open space in commercial buildings, and for commercial design guidelines for the joint use
 56 of parking. If you are going to mention two of them, you should mention all of them.

56-31

1 Chair Chastain said he wants to back earlier to page 4-3. He would like a quick report back what this
 2 means, the last paragraph, talking about topics of greater geographic extent used for cumulative analysis.
 3 How large is that? How does he understand that? Mr. Noack confirmed that this is the section that
 4 discussed the cumulative analysis. What this is saying is that the range of cumulative projects or the area
 5 of study varies by topic area. You could have a watershed in a biological study that is greater than this Plan
 6 Area, but you would still have to look at development within that watershed. It depends the subject area
 7 that you talking about.

56-32

8
 9 Commissioner Mitchell referred to page 4.1-3, Table 4.1-1. He said he did not know if this was taken out
 10 the General Plan, but there is no category looking west. If you are updating this chart, you might want to
 11 put in a number 5. We only chose one of those as a photo simulation.

56-33

12
 13 Commissioner Mitchell said he already asked this on the list of questions about photo simulations. It shows
 14 the Safeway parking lot, but it does not show a structure pulled to the street. He was wondering if there
 15 was a reason for that.

56-34

16
 17 Commissioner Maggio referred to page 4.1-14, Standards of Significance. This alludes to why there was no
 18 significant impact on aesthetics, particularly C.3. If we look at that with this analysis, the EIR is saying the
 19 Plan is not at this level of significance. She questioned that. Commissioner Ateljevich said it is not just the
 20 Plan. It is anything that has redeveloped 80 percent of the buildings downtown is going to have a significant
 21 impacts. Chair Chastain asked Commissioner Maggio if she would like an explanation of that. She replied,
 22 yes. How is C.3 not significant?

56-35

23
 24 Chair Chastain continued with 4.2 Air Quality.

25
 26 Commissioner Lovitt referred to page 4.2-21, final paragraph, where it discusses the population increase of
 27 4,600 and 1,500 new jobs. He is trying to understand where the jobs come from. Is it somewhere else in
 28 the report? Ms. Lynch said she did not have the paragraph in front of her, but it is explained in that
 29 paragraph. That number comes from the 360,000 square feet of new retail and office development, and
 30 there is a difference in the number of employees per square foot for retail development and office
 31 development. That results in that approximate number. Commissioner Ateljevich asked if they count
 32 restaurants? Ms. Lynch responded that restaurants are included in retail; it is a broad category.

56-36

33
 34 Ms. Lynch said the 1,500 jobs are based on an assumed number of employees per square foot for retail
 35 development for the number of new employees per square footage. There is a number for office
 36 development as well. Again, to be conservative, we use a range of new employees, such as two to three
 37 employees per thousand square feet. Whenever there such a range, we would take the higher number to
 38 assume a greater number of jobs because that would result in a higher impact. They were trying to cast
 39 that bigger umbrella wherever they could. Ms. Merideth said there is a description on page 3-18 that Ms.
 40 Lynch was referring to that talks about how employee numbers were developed. This was also carried
 41 through the analysis that Libby Seifel did in terms of economic impacts that you saw a couple of weeks
 42 ago. Those are the same numbers there, too.

43
 44 Commissioner Maggio referred back to paragraph b. on page 4.1-34, still on visual quality. This is the
 45 explanation of why there is no significant impact, and she is concerned that we putting the onus on design
 46 guidelines and the Design Review Commission to address the impact of projects on the existing style. The
 47 hope is the guidelines and Commissioners will make sure the proposals are not too tall or massive or
 48 restrict the views of adjacent properties. That is a tall order. She is questioning whether that is a strong
 49 enough mitigation? As good as the Design Review Commission is, it puts a huge responsibility on them to
 50 design with that much density.

56-37

51
 52 Chair Chastain continued with 4.3 Greenhouse Gas Emissions. He referred to Table 4.3-1 on page 4.3-22,
 53 notes on the bottom. He referred to a. and b. He said it would be nice to have an explanation of where the
 54 20 percent is coming from? What could affect it?

56-38

55
 56 Chair Chastain continued with 4.4 Cultural Resources.

56-39

1	Commissioner Mitchell referred to page 4.4-7, Table 4.4.-1. It talks about General Plan policies. He wants		56-39
2	to understand if there is a historic building, such as Postino, what does that mean? Does that mean the		
3	building cannot be touched or what are the ramifications of that designation?		
4			
5	Commissioner Ateljevich asked staff if the Historical Society read this section? Ms. Merideth said that she		56-40
6	could send it to them. Knapp Architects did work with them.		
7			56-41
8	Chair Chastain continued with <u>4.5 Geology and Soils</u> .		
9			56-42
10	Commissioner Ateljevich said this is a cleaned up version of the fault lines. Restricting ourselves to major		
11	fault lines is probably not telling much of a story.		
12			56-43
13	Chair Chastain continued with <u>4.6 Hazards and Hazardous Materials</u> . There were no questions or		
14	comments from Commissioners.		
15			56-44
16	Chair Chastain continued with <u>4.7 Hydrology and Water Quality</u> .		
17			56-45
18	Commissioner Ateljevich asked the FEMA regulations are what? How do they affect the areas of the 100-		
19	year flood exactly? Can you still put buildings in that area? It is a little ambiguous on what causes the		
20	baseline flood level to rise. Wouldn't it be solid things in the floodway? Explain what the FEMA regulations		
21	mean in terms of restrictions on uses in that area.		
22			56-46
23	Chair Chastain said we are at 4.8. He complimented the Commission on doing so well; his goal was to		
24	make it just to here this evening. He said he wanted to move to <u>4.13 Traffic and Transportation</u> .		
25			56-47
26	Commissioner Ateljevich said she assumes the Circulation Commission will be reviewing this section. Ms.		
27	Merideth replied that they are doing that downstairs right now. Commissioner Ateljevich said why don't we		
28	wait until we see that. Ms. Merideth replied that that you might not see it until March 16 th . Chair Chastain		
29	said it okay for us to proceed; we may want to come back to this. Commissioner Ateljevich said their		
30	considerations have to be dealt with anyway.		
31			56-48
32	Vice-Chair Curtin-Tinley said if this can be explained now, that would be great. If not, an answer can come		
33	later. On page 4.13-15, it identifies three intersections that already operate at unacceptable levels of		
34	service. Already they are operating at LOS D or greater. Obviously, with nothing more, they will continue to		
35	operate at unacceptable levels. How much more unacceptable are they under the Plan? Rich Haygood		
36	responded that it is described later in the chapter. It is a lot more unacceptable. He referred to Table 4.13-		
37	15 on page 4.13-36.		
38			56-49
39	Vice-Chair Curtin-Tinley said this includes all cumulative traffic, not just from the Plan. Mr. Haygood said it		
40	is a cumulation of all traffic projected over the 20-year horizon, traffic from all development over the 20-year		
41	horizon. Moraga Road and School Street is already F in the AM and PM. Compared to existing conditions,		
42	the morning delay would go up by about 45 seconds, mid-day delay doubles, and the PM delay becomes		
43	LOS F when it is actually the afternoon commute is much better than that now. The point of reference is the		
44	No Project on page 4.13-29 which also shows significant increases in delay with the No Project, General		
45	Plan scenario.		
46			56-50
47	Vice-Chair Curtin-Tinley said the No Project scenario is full buildout General Plan? Ms. Lynch responded it		
48	assumes the buildout described in the alternative. It assumes the downtown would develop under the		
49	General Plan rather than the Specific Plan. When we say No Project, it does not mean no development.		
50	The regulations in the General Plan would be guiding development rather than the proposed Specific Plan.		
51			56-51
52	Commissioner Mitchell asked if one of them was 80 percent? Ms. Lynch said, as she described earlier, the		
53	General Plan methodology was different than the other alternatives. It assumes the methodology used for		
54	the General Plan projections.		
55			

1 2 3 4	Commissioner Maggio referred to page 4.13-2, and asked about “good” LOS D and “poor” LOS D. She was not sure that was the appropriate description. Mr. Haygood responded that is directly out of the General Plan. Ms. Merideth confirmed that those are from the General Plan.	56-49
5 6 7 8 9 10 11 12	Commissioner Lovitt referred to a couple of questions from Vice-Chair Curtin-Tinley made earlier. The degradation of traffic is all due to implementation of the Plan, and there is no additional influence from the level of traffic to and from other communities. You did not make projections about what was going to happen in Moraga? Mr. Haygood responded that they did include future development plans in Moraga and neighboring communities, and all of that is included in the cumulative results that are presented for the both the No Project and the Project. It is a common reference point. Commissioner Lovitt asked it really is all inclusive? Mr. Haygood replied yes.	56-50
13 14 15 16 17 18 19 20 21 22 23 24 25	Commissioner Mitchell asked about page 4.13-20 and the transit reduction factor. If we could get an explanation what that actually means? It also says this table has been adjusted because of circumstances in Lafayette because we have a BART station. How was it adjusted, and what was the base? Mr. Haygood responded that in looking at how much traffic would be generated by the proposed Plan or the background plans, in all the traffic analyses that we do, we use trip generation rates from ITE. For different land uses, they surveyed many sites throughout the country to determine how many trips would be generated by each unit of development. It is trips per dwelling unit, for example, or trips per 1,000 square feet for commercial space. These surveys that ITE has done are almost exclusively done for isolated suburban uses with no transit services. To use those without any adjustment would not be appropriate for a downtown area like Lafayette where there is a BART station, transit access to many parts of the Bay Area, either directly or with other connections. These transit reductions reflect the proximity of BART and access to other transit for Lafayette downtown as compared to what is in the base ITE rates.	56-51
26 27 28 29 30	Commissioner Lovitt asked what is the level of reduction that occurs from ITE? Commissioner Mitchell said before we get to that part, if we get to the first part, it says proximity to BART. It says residential use when you are less than 1/8 th of a mile, it says 15 percent. Does that mean 85 percent of the people are not taking BART? Mr. Haygood responded that is correct for that does not cover much more than the BART block.	56-52
31 32 33 34 35 36	Commissioner Mitchell said 85 percent of the people that live within 1/8 th of a mile would not take BART? Mr. Haygood said that is the assumption in this study that we used. Down further in the table, a quarter of a mile is a 10 percent reduction for AM and PM peaks, more than a quarter of mile, a five percent reduction. In his opinion, these transit reduction factors are fairly conservative. They can be fairly representative of existing conditions, and in the future he felt that greater reductions would be likely to occur.	56-53
37 38 39 40	Commissioner Lovitt asked about the overall reduction factor from ITE. Mr. Haygood responded that this is a menu looking at different areas using different calculations. Looking at the overall impact on trip generation, the overall trip reduction was no more than six percent.	56-54
41 42 43 44 45 46 47 48 49 50 51	Commissioner Mitchell referred to page 4.13-25. It talks about trip generation and retail, residential and offices uses. Under the total AM peak, it is showing 133 for retail and 444 for residential. What he had always understood is that retail tends to generate more trips than residential. Is that true, or is it based on a square foot basis so that these numbers seems to point in the other direction with residential producing more trips? Mr. Haygood replied the difference you are seeing is because of the quantities involved. For retail, it is 138,000 square feet and for residential it is 730 dwelling units. The assumption is those dwelling units are 1,000 square feet each. That means 730,000 square feet of residential development versus 138,000 square feet of retail. Commissioner Mitchell asked if it is true that retail tends to generate more traffic per square feet than residential? Mr. Haygood said yes, especially in the PM peak hour when retail is more active. In the AM, it is a closer differential.	56-55
52 53 54	Chair Chastain said there is still time; it is good for us to get through it tonight. He said he wanted to return to <u>4.8 Land Use and Planning</u> .	56-56
55 56	Commissioner Ateljevich referred to page 4.8-6 and questioned if it were true that Golden Gate Way has the largest concentration of auto-related uses and light industrial uses?	

1	Commissioner Mitchell said he had a question on page 4.8-3 where it says administrative professional		56-57
2	office. It says there is a maximum height of 35 feet. It was his recollection that staff said Moraga Road had		
3	a different height restriction or a setback or stepback requirement like in C-1 in the East End. He wanted		
4	some personal clarification on it.		
5			
6	Chair Chastain continued with <u>4.9 Noise</u> . There were no questions or comments from Commissioners.		56-58
7			
8	Chair Chastain continued with <u>4.10 Population and Housing</u> . There were no questions or comments from		56-59
9	Commissioners.		
10			56-59
11	Commissioner Ateljevich said the fire response is already slower than it is supposed to be, than the		
12	General Plan says it should be. Apparently there is no impact unless it gets worse than it already is, is that		56-59
13	right? Ms. Merideth said that is something that we will address in the Final.		
14			56-60
15	Chair Chastain continued with <u>4.11 Public Services</u> . There were no other questions or comments from		
16	Commissioners.		56-60
17			
18	Chair Chastain continued with <u>4.12 Utilities and Service Systems</u> .		56-60
19			
20	Commissioner Lovitt said that we get a lot of information coming out of EBMUD over the years saying that		56-60
21	it is running out of capacity. Is he wrong in that respect? Ms. Merideth said that was the case before they		
22	started their new projects, which she thought was reflected in here. Now that they have started their new		56-60
23	projects, there is not a capacity problem.		
24			56-61
25	Chair Chastain asked if there were additional questions about <u>4.13 Traffic and Transportation</u> .		
26			56-61
27	Commissioner Mitchell said on page 4.13-13 is the chart showing where cars are driving and turning. The		
28	figure is 4.13-3. If you go to Intersection 18, he wanted to see if he was reading it right. It is Moraga Road		56-61
29	and School Street. If you look at all the cars coming out of School Street in the mid-day period, it appears		
30	that 213 cars are turning right and 37 cars are turning left. There are roughly 250 cars using that		56-61
31	intersection during that hour period. He was wondering if that were accurate owing to the fact that are		
32	1,500 kids that go to that school and there is probably another 350 that go to Lafayette School? Is the 250		56-61
33	total wrong, or are there really 12 kids in each car, a lot of bike riders? Mr. Haygood responded that it is		
34	based on an actual count at the intersection at that peak period, the school commute period of one hour.		56-61
35	He knows there are other ways around Stanley School. Topper Lane backs up quite a way from St. Mary's		
36	Road. There is also a lot of pick-up activity after school on St. Mary's Road. His recollection from having a		56-61
37	daughter at Stanley School is there tends to be more carpooling, delayed pick-ups in the afternoon versus		
38	the morning.		56-62
39			
40	Commissioner Mitchell referred to page 4.13-69 on bicycles and how it relates to that school area. It may		56-62
41	be more of a staff type question. It talks about Brook Street and School Street. He asked before if we might		
42	see some sections of that area. When we discussed this before, he had asked for more ways to		56-62
43	accommodate kids riding to school to reduce traffic impacts. He was hoping to see a section there, and		
44	was hoping to see if they could some more information. Ms. Merideth said it is on the list.		56-63
45			
46	Chair Chastain continued with <u>4.14 Biological Resources</u> . There were no questions or comments from		56-63
47	Commissioners.		
48			56-63
49	Chair Chastain continued with <u>Chapter 5. Alternatives</u> . He said just questions or comments at this point.		
50			56-64
51	Commissioner Ateljevich referred to page 5-2. She said there is list here. Some of those things on the list,		
52	like tree protection standards, that has been done. Other things do not make much sense. It provides		56-64
53	things that the Project will do that the No Project will not do other than to say the Plan does not do that.		
54	Chair Chastain asked her to say it again. She said basically many of these bulleted things simply say the		56-64
55	difference between this Plan and the No Project Plan is that this Plan does not happen. For instance, you		
56	would not change the General Plan to conform with this Plan. You would not have the standards that this		56-64

1	Plan provides. It is kind of an empty list. It simply says the Plan would not happen. Many of the things, like		56-64						
2	the design and signage standards and the zoning ordinance can be amended at any time. They do not				cont.				
3	need a specific plan. The commercial design is called for in the General Plan. Chair Chastain said should								
4	we ask for a clear relationship between the General Plan and the Project?								
5									
6	Commissioner Mitchell said he had the same question. As an example, with regard to the last bullet point		56-65						
7	regarding tree protection. Commissioner Ateljevich said we have already done that. Commissioner Mitchell								
8	said that clarified it for him. He was under the impression that we could modify these standards if it was								
9	part of the Plan.								
10									
11	Commissioner Maggio said she had a comment. Looking at the No Project alternative versus the Lower		56-66						
12	Intensity alternative, she was struck by the difference. Commissioner Ateljevich said, for one thing, they								
13	used the Planning Commission plan, but not the amended as we amended it. There is more of the 43 feet								
14	height than we actually ended up with in our plan. Commissioner Maggio said that would explain the								
15	increased density. Chair Chastain said we should ask for clarity in how that achieves the density it is,								
16	because it is a surprise.								
17									
18	Commissioner Lovitt commented that Table 5-2 is telling.						56-67		
19									
20	Commissioner Ateljevich referred to page 5-19. She said the last paragraph says the Project alternative,								
21	they are talking about the No Project alternative, does not involve the policies proposed by the Plan. It says								
22	the Plan seeks to protect the visual quality. So does the General Plan. These policies target urban design.								
23	So does the General Plan. Building design, open space, streetscape design, the General Plan already								
24	foreshadows all that. Chair Chastain asked that the question might be the distinction between the two?								
25	Commissioner Ateljevich said they are making the distinction that she does not think is true. Chair Chastain								
26	said the question is, what is the distinction between the Project and the No Project in terms of these.								
27									
28	Commissioner Mitchell referred to page 5-20, paragraph c, greenhouse gas emissions. The lower						56-69		
29	greenhouse gas emissions under the No Project alternative would be the growth of future growth that								
30	occurred somewhere else. He does not understand where that somewhere else is.								
31									
32	Commissioner Ateljevich said she believes the General Plan does not increase walking and bicycle riding.				56-70				
33									
34	Commissioner Mitchell continued, and said the point he was trying to make is the area outside the RDA will								56-71
35	be developed fully in the next 20 years, will be fully build out, whether we modify our RDA area or not. He								
36	does not understand that one sentence, and asked for clarity.								
37									
38	Commissioner Mitchell referred to page 5-23. Do we have an emergency plan if we have an earthquake						56-72		
39	and the Reservoir breaks? Ms. Merideth replied yes. He asked if there are sirens that would go off to warn								
40	people? Does EBMUD have a big valve that they will release so water can come out faster? Ms. Merideth								
41	said the City has an Emergency Operations Plan. She does not believe we have a siren system in								
42	Lafayette. You are sitting in the Emergency Operations Center right now. What happens in the event the								
43	Reservoir fails is all part of the Plan and what the response would be. Commissioner Mitchell said he was								
44	told the reason the water tower was built real high is they were planning to make the dam real tall. When								
45	they were building the dam, they came across bad soils, and it was not safe to build it to the height they								
46	originally determined. So it would lend someone to believe there is some risk with that dam and an								
47	earthquake. He was wondering about that emergency, there are a lot of people living down by the								
48	Veterans.								
49									
50	Commissioner Ateljevich referred to page 5-26, second paragraph. She read the paragraph. She said not								
51	fair, not true. Chair Chastain said the comment is we are interested in policies under the General Plan and								
52	what is proposed in the Project. That is a good question throughout the document. There needs to be								
53	greater clarity between the Project and the No Project, because it is not true that under the No Project that								
54	there are not also programs and policies that would have an effect on some of these issues. In general, it								
55	would be important to clarify the document, and to provide the difference between the two. Commissioner								

1 Ateljevich said it has to clear that zoning authority, authority over specific plans, with or without a specific
2 plan is completing a mandate.

3
4 Chair Chastain continued to Chapter 6. Required Assessment Conclusions. There were no questions or
5 comments from Commissioners.

6
7 Chair Chastain said he imagined that they would have more comments later in their next visit. He asked if
8 they need a motion to continue this? Ms. Merideth replied it is up to you. It has already been advertised.
9 You can consider this as one public hearing, and the next as a second public hearing, whatever you prefer.
10 Chair Chastain said they will continue it.

11
12 Commissioner Lovitt moved to continue the public hearing. The motion was seconded by Commissioner
13 Ateljevich.

14
15 Commissioner Lovitt said he would like to spend time going through specific mitigations, going through
16 those one more time, to really try to hone in on where there are concerns or further questions. That would
17 be a reasonable thing to concentrate on. Chair Chastain agreed. He said come back and discuss the
18 relationship between a mitigation in here and how it ties us to actions later. Throughout our discussion,
19 that has been a continued question. It would serve everyone to have answered yet again.

20
21 The motion to continue the public hearing carried by unanimous consent (7-0-0).

22 OTHER BUSINESS

23 **DISCUSSION OF THE DOWNTOWN SPECIFIC PLAN REVIEW PROCESS**

24
25 **Recommendation:** Provide direction to staff.

26 Project Planner: Niroop Srivatsa, Tel. (925)299-3206 • nsrivatsa@lovelafayette.org

27
28 Niroop Srivatsa said staff put this on here because it is important for us to talk about it because in April we
29 will get back to the Specific Plan review. She said she did meet with Chair Chastain and Vice-Chair Curtin-
30 Tinley, and we have some ideas on how to proceed with the review of the Draft Specific Plan. We can
31 come back at the next meeting with a proposal for the Planning Commission's review.

32
33 Commissioner Mitchell said there had been discussion from Erling Horn about parking and his
34 recommendation that there be a committee formed. He was thinking Erling had some experience with
35 parking, and seemed willing to volunteer with that. It would be his personal preference that we get a head
36 start on parking and design guidelines before this is done. He would be in favor of a motion that we make a
37 recommendation to the City Council that they proceed in establishing a parking committee to look at
38 parking. First step may be looking at employee parking.

39
40 Commissioner Lovitt asked to interrupt before the EIR consultants left. He had one more comment. Some
41 questions and concerns about details aside, he wanted to congratulate them on a really thorough and well
42 done project. Chair Chastain agreed.

43
44 Ms. Srivatsa responded to Commissioner Mitchell, and said she liked the idea but she wanted to give an
45 update on what is happening. As they will recall, they met with the City Council to review the Work Plan,
46 and the City Council continued the matter to the March 8th meeting. They wanted staff to prioritize the
47 tasks, which she did at the last meeting. They were not quite satisfied with the levels of priorities. They felt
48 there should be more medium and low priority tasks, which she has done. It is on the agenda for their
49 consideration next Monday. What she has recommended to the City Council is two things. First, they defer
50 approval of the master task list until the budget workshop, which is May 24th. The reason they asked us to
51 prioritize is because of the budget. But she has asked them to give us the green light to go ahead with the
52 parking study and commercial design guidelines in the interim. She explained that the Planning
53 Commission needed the information to formulate its recommendations. She wants to wait until Monday to
54 make sure they agree. From staff's perspective, they support a parking task force, but there is a lot of work
55 to be done before we get there. We have started preparing base maps in each block in the downtown, and
56

1 staff is going to literally count the spaces, identify them as public or private, whether they are metered and
 2 for how long. We need that base data to offer to whatever committee or commission gets formed. It is
 3 something we should do later on, but at this point, we need time. It will be more efficient for us to collect
 4 that information.

5
 6 Commissioner Mitchell asked how does that relate to the commercial guidelines? Ms. Srivatsa responded
 7 that we are doing the same thing. We have started collecting sample commercial guidelines from other
 8 communities. We will be sifting through them, and coming up with some ideas. We will coming back to you
 9 and the Design Review Commission because we want your feedback. It is going to be a process where we
 10 touch base with the two Commissions every step of the way. Because the Council has not approved those
 11 tasks, we have not created a task description yet. She hopes the Council approves those two tasks on
 12 Monday.

13
 14 Chair Chastain asked if Ms. Srivatsa needs a writing campaign? Ms. Srivatsa said she mentioned that it is
 15 the Commission's recommendation that we get started on both.

16
 17 Chair Chastain said they need a bit of a road map going forward. The relationship between a task force for
 18 parking and what we are doing needs to be tied together well. It will take them some time. We are not trying
 19 to solve the problem as much as identify strategies to be included in the Plan. He can see we will have
 20 some discussions, and we may want to have presentations. Our questions will help direct staff's work. It will
 21 be a bit back and forth on these topics.

22
 23 COMMISSIONERS' ACTIVITY REPORT

24
 25 None

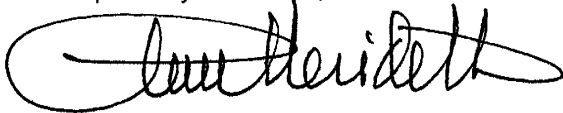
26
 27 PLANNING MANAGER'S REPORT

28
 29 Ms. Srivatsa went through the Design Review Commission agenda, and Commissioner Mitchell is signed
 30 up. She said he will be pleased to know he will not need to attend. We have one sign application and an
 31 application for a fence.

32
 33 ADJOURNMENT

34
 35 Commissioner Maggio moved to adjourn the meeting at 9:20 pm. Commissioner Lovitt seconded the
 36 motion which was carried by unanimous consent (7-0-0).

37
 38
 39 Respectfully submitted,

40
 41 

42
 43
 44 Ann Merideth, Community Development Director

56-74
 cont.

LETTER 56

Planning Commission meeting, March 1, 2010.

Response 56-1

This comment letter presents the Planning Commission meeting minutes from March 1, 2010. The comment summarizes an exchange between the Planning Commission and the EIR consultant during which CEQA law and the EIR process is explained. This discussion does not address the adequacy of the Draft EIR. Therefore no response is necessary.

Response 56-2

The comment summarizes an exchange between a hearing participant and the EIR consultant during which it is explained that the buildout projection for the Plan incorporates an assumption that development on opportunity sites would develop to 80 percent of the maximum potential.

Response 56-3

The comment states that the Draft EIR is not adequate because it narrowly addresses views and does not address the overall aesthetic of a small town. The comment states that the Draft EIR should assess aesthetics at a human level. Please see response to Comment 9-60, above. The Draft EIR does provide an assessment of how new development built to higher heights and to the property line in contrast to existing development would affect one's experience in the downtown.

Response 56-4

The comments summarize statements made during the meeting that pertain to the CEQA process. These statements do not address the adequacy of the Draft EIR. Therefore no response is necessary.

Response 56-5

The comment summarizes an exchange between the Planning Commission and the EIR consultant during which it is explained that the reasons for the

impact findings in the Draft EIR are contained in the detailed impact discussions for each standard of significance in Chapter 4 of the Draft EIR.

Response 56-6

The comment asks how impacts to aesthetics were determined. Please see responses to Comments 9-60 and 56-4, above. The CEQA standards of significance used in the aesthetics analysis of the Draft EIR are whether the Plan would: 1) have a substantial adverse effect on a scenic vista; 2) substantially damage the view from a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings; 3) substantially degrade the existing visual character or quality of the downtown area and its surroundings; or 4) create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Response 56-7

The comment refers to tree plantings recommended through Mitigation Measure AQ-2, and states that the recommended trees conflict with the intent of *Trees of Lafayette*. Mitigation Measure AQ-2 has been revised accordingly, as shown in Chapter 3 of this Final EIR.

Response 56-8

The commentor expresses concern regarding whether the portion of Mitigation Measure AQ-2 requiring notification of future occupants who may have dwellings located within 250 feet of State Route 24 would be sufficient to advise a knowing resident of the effects and what actions he or she should take. This portion of Mitigation Measure AQ-2 was developed using recent guidance provided by BAAQMD and is intended to inform residents or occupants of the effects so that they could take meaningful actions to reduce their exposure (e.g., minimize the opening of windows closest to the highway). Other measures included in Mitigation Measure AQ-2 would help reduce the impact. However, if filtration systems were used to ensure less-than-significant exposure, then occupants that have their windows open would reduce the effectiveness of the measure.

Response 56-9

The commentor requests a map with a line depicting 250 feet from State Route 24. Please see response to Comment 10-12.

Response 56-10

The commentor asks how the 250-foot buffer was developed and how changes to the BAAQMD guidelines might affect the buffer. Please see responses to Comments 9-68, 9-71, and 9-78. The Draft EIR evaluation relies on the most recent accepted methodologies for evaluating impacts from freeways. Impacts for TAC exposure from freeway traffic have been conducted under the previous BAAQMD CEQA Guidelines and this analysis is no different except that it utilizes the most recent information regarding traffic projections, emission rates, and known toxicity of TACs from traffic. The only change with the recent update to the guidelines is the addition of a threshold for PM_{2.5} exposures. However, there is precedent for the proposed PM_{2.5} exposures, since BAAQMD is relying on information provided by U.S. EPA and utilized by the City of San Francisco's Public Health Department in developing guidance for siting new residences near busy roadways.

Response 56-11

The comment requests that the Forge be added to the list of buildings of historic interest. Please see response to Comment 9-33, above.

Response 56-12

The commentor requests that noise mitigation measures requiring noise barrier, for outdoor eating along Mount Diablo Boulevard be reconsidered. Please see response to Comment 6-4.

Response 56-13

The comment states that the Planning Commission may disagree with a finding of Chapter 4.8, Land Use and Planning. However, the comment is not specific in stating which aspects of the analysis do not, in the opinion of the commentor, meet the requirements of CEQA. Therefore, it is not possible to respond, and no revision to the Draft EIR is necessary.

Response 56-14

The comment summarizes an exchange between the Planning Commission and City staff in which it is explained that the City is permitted to allow for a project to demonstrate the availability of adequate services prior to building approval. The City is permitted to require such findings due to the nexus between new development and the services required to serve that development. This is consistent with General Plan Goals LU-19 and LU-20 and their respective policies and programs.

Response 56-15

The comment asks for more information regarding Mitigation Measure PH-1 and how it will be implemented. Please see response to Comment 9-40.

Response 56-16

The comment states that public services can be offset by fees but that infrastructure is a slightly different matter. The comment requests clarification on how infrastructure will be provided under Mitigation Measure PH-1. Please see response to Comment 9-40.

Response 56-17

The comment asks for more information regarding Mitigation Measure PH-1. The comment asks which services and infrastructure would be included in this mitigation measure. Please see response to Comment 9-40.

Response 56-18

The comment asks whether the EIR consultant would respond to comments received from the Department of Transportation. Please see responses to Comments 1-1 through 1-6.

Response 56-19

The comment asks for information regarding Mitigation Measure TRAF-1. Mitigation Measure TRAF-1 proposes restriping Oak Hill Road north of Mount Diablo Boulevard to provide a fourth southbound lane, which can be implemented without widening the existing pavement. As described in sec-

tion A.4.c.i on page 4.13-40 of the Draft EIR, restriping the roadway to add the fourth southbound lane by shifting the northbound lanes toward the east curb could eliminate up to six parking spaces on that portion of Oak Hill Road. In response to the comment's question about what it means if the mitigation is determined not to be an option based on other factors, the result would be a significant and unavoidable impact on PM peak hour traffic operations at the Mount Diablo Boulevard/Oak Hill Road intersection, unless alternative mitigation can be provided. However, the projected PM peak hour delay exceeds the unacceptable LOS E threshold by less than 0.1 (one-tenth) seconds, indicating that this level of congestion would not be expected until all of the projected development in the Plan Area over the 20-year Plan horizon had occurred. The City could monitor this intersection and implement the recommended mitigation if and when PM peak hour operations deteriorate to LOS E. Mitigation Measure TRAF-1 has been revised to reflect this monitoring information.

Response 56-20

The comment asks for information regarding Mitigation Measure TRAF-2, and requests illustration of the mitigation. Mitigation Measure TRAF-2 in the Draft EIR suggests possible widening of Moraga Road south of Mount Diablo Boulevard to add a second northbound right-turn lane. As described in section A.4.c.ii on page 4.13-40 of the Draft EIR, the widening would require substantial reconstruction of the sidewalk, landscaping, and structural elements of Plaza Park along the east curb area, and would result in a reduction of the usable recreation and community activity area at the park. This issue, along with that of increasing the pedestrian crossing distance at the intersection, could prevent implementation of this mitigation measure because it would be inconsistent with City policies. As a result, Mitigation Measure TRAF-2 is considered infeasible and the Plan's impact on peak hour traffic operations at the Mount Diablo Boulevard/Moraga Road intersection is significant and unavoidable, as stated on page 4.13-49 of the Draft EIR. Additionally, as shown in Chapter 3 of this Final EIR, the paragraph with the heading "Mitigation Measure TRAF-2" on page 4.13-49 has been revised to state more directly that no feasible mitigations are available to reduce this

impact to a less-than-significant level. The requested illustrations are beyond the required scope of a programmatic EIR. When specific development applications and roadway improvement projects are proposed, additional information at this level of detail would be warranted.

Response 56-21

The comment states that improving the LOS on Moraga Road would affect neighboring communities, thereby increasing the traffic coming through Lafayette to Moraga. Mitigations that would improve the LOS at Moraga Road intersections could potentially attract more traffic demand from the Town of Moraga and south Lafayette to Moraga Road and other downtown Lafayette arterial roadways, and increase the volume of through traffic on those roadways. LOS improvements on Moraga Road could also influence the approval of additional development in the Town of Moraga and potentially lead to further traffic increases from such development.

Response 56-22

The comment asks if installing a traffic signal at Deer Hill Road and Oak Hill Road is “semi-rural.” Traffic signals may usually be associated with urban and suburban settings, but are also used at major highway intersections and in small business districts in rural settings. Deer Hill Road/Oak Hill Road is the intersection of two four-lane roadways with additional turn lanes at the intersection, except the north leg of Oak Hill Road, which has two lanes. In addition to high traffic volumes at the intersection, large numbers of pedestrians cross the south side of the intersection during peak periods. The heavy traffic and pedestrian activity is largely related to the adjacent BART station and its large, paved parking lots, serving a major metropolitan rail transit system. Vehicle volumes also include traffic accessing the nearby westbound ramps for the adjacent, eight-lane State Route 24 freeway, which crosses over Oak Hill Road. These characteristics strongly suggest a setting that is far more suburban than rural, and installing a traffic signal approximately one-quarter mile from the closer of two existing traffic signals on Deer Hill Road would not seem out of place.

Response 56-23

The comment asks whether it would be possible to determine how much traffic on Moraga Road is generated by the Town of Moraga. Please see response to Comment 4-16 for information regarding the percentage of traffic to/from Moraga on Moraga Road and other selected Lafayette roadways in the study area during peak hours.

Response 56-24

The comment states that the Draft EIR contains an unusual number of significant and unavoidable impacts. The traffic analysis presented in the Draft EIR evaluates 25 intersections plus the State Route 24 freeway and Pleasant Hill Road “Routes of Regional Significance.” Some of these intersections already operate at an unacceptable peak hour LOS, and several others are susceptible to LOS deterioration with future traffic growth. The potential mitigation measures at a number of the significantly impacted intersections would have secondary impacts that are contrary to City policies and are related to facilitation of through traffic at the expense of pedestrian and bicycle safety and convenience or community identity. State Route 24 and Pleasant Hill Road are currently congested in the peak hour peak direction, and possible mitigation measures would not provide significant relief or would be considered infeasible because of the issues involved, adopted policies, or cost.

Response 56-25

The comment asks how much traffic is generated from outside Lafayette on Pleasant Hill Road, with respect to Impact TRAF-10. To evaluate the Plan’s impacts in the context of future Cumulative traffic conditions, only the total accumulation of other future traffic is relevant, not portions of traffic from individual sources. The purpose of the Draft EIR is to evaluate the Plan’s impacts, not the relative impacts of other individual sources of traffic. Additional analysis related to other sources of traffic contributing to congestion can be conducted in future separate studies, but would be outside the scope of the Draft EIR and are not pertinent to the analysis of this EIR.

Response 56-26

The comment asks whether signs for parking facilities would mitigate increased localized traffic. Please see response to Comment 9-46.

Response 56-27

The comment summarizes an exchange between the Planning Commission and EIR consultant during which the General Plan and the Plan buildout projections were explained. Please see response to Comment 7-7 for further explanation of this topic.

Response 56-28

The comment asks what is meant by the following statement that appears on page 3-18 of the Draft EIR: “The actual rate and amount of development is dependent on market conditions and regulatory processes. Additionally, given the historic rate of growth in Lafayette, the high cost of land, and irregular parcel sizes in the Plan Area, it is unlikely that the buildout numbers would be fully realized.” This text in the Draft EIR is making the point that the buildout numbers were developed independent of market forces and other factors affecting development feasibility. Real world conditions such as Lafayette’s past development trends, the high cost of land in the Plan Area, and the irregular parcel sizes in the Plan Area will have a large effect on development feasibility, but this fact is not reflected in the buildout calculations. Therefore, the projected volume and rate of future development is higher than can actually be expected to occur. As described above in response to Comment 44-25, the City has commissioned economic impact and financial feasibility analyses from Seifel Consulting, and will use Seifel Consulting’s findings as a separate informational document along with the Draft EIR.

Response 56-29

The comment asks for clarification regarding how the No Project Alternative buildout methodology differs from the methodology used in calculating the buildout of the Plan. Please see response to Comment 7-7.

Response 56-30

The comment requests clarification regarding which creeks were included in the Draft EIR's evaluation, and asks whether a section of a creek near the BART station was included. Figure 4.14-2 on page 4.14-14 of the Draft EIR shows the Happy Valley Creek alignment through the Plan Area, including the open segment south of the BART station.

Response 56-31

The comment requests that Programs LU-7.1.2 through LU-7.1.5 of the General Plan be added to Table 4.1-1 of the Draft EIR. Table 4.1-1 of the Draft EIR has been revised accordingly, as shown in Chapter 3 of this Final EIR.

Response 56-32

The comment summarizes an exchange between the Planning Commission and EIR consultant in which it is explained why the cumulative setting can vary between environmental topics. For example, a cumulative impact associated with a watershed will involve a larger geographic area than the cumulative impacts associated with noise. No response is necessary.

Response 56-33

The comment states that there are no westward views in the General Plan's Scenic View Corridors map. The comment is noted. This EIR does not provide a vehicle for revising this map. The Planning Commission did direct that the visual simulation at Carol Lane looking westward down Mount Diablo Boulevard be included in the Draft EIR as a way of analyzing westward views.

Response 56-34

The comment asks why the development simulated in Figure 4.1-12 of the Draft EIR does not front directly onto Mount Diablo Boulevard. Please see response to Comment 10-8, above.

Response 56-35

The comment questions why the Draft EIR did not find a significant impact associated with degradation of the Plan Area's visual quality. Please see response to Comment 9-60, above.

Response 56-36

The comment summarizes an exchange between the Planning Commission and EIR consultant during which the calculations for employee generation were explained. As explained on page 3-18 of the Draft EIR, employee calculations are based on a calculation of one employee per 300 feet of retail space and one employee per 200 square feet of office space. These figures are based on a range of 200 to 300 square feet per office job, and 300 to 500 square feet per retail job. These ranges were developed in consultation with Seifel Consulting. The lower end of each range was used for these calculations in order to provide a higher estimate of employees, which translates into a more environmentally conservative EIR analysis.

Response 56-37

The comment questions the Draft EIR's reliance on design guidelines and design review as a means for avoiding aesthetic impacts. Please see response to Comment 9-66.

Response 56-38

The commentor requests an explanation for the 20 percent reduction referred to in the footnote of Draft EIR Table 4.3-1, which presents greenhouse gas emissions for the Plan Area. The footnote is meant to indicate that energy efficiency programs applied to new and retrofitted development could reduce new emissions from natural gas and electricity usage by at least 20 percent. Pages 17 and 18 of the updated BAAQMD CEQA Air Quality Guidelines report that energy efficiency gains with periodic improvement in building and appliance energy standards and incentives will reach 10 to 15 percent for natural gas and electricity, respectively. The respective reductions for new construction are expected to be 13 percent for natural gas and 26 percent for electricity. Much of these reductions will come from changes to the State

Building Code requirements that have recently been updated and new modifications to increase energy efficiency are expected to go in effect in January 2011. In addition, the Renewable Portfolio Standard (rules) will require the renewable energy portion of the retail electricity portfolio to be 33 percent in 2020. For PG&E, the dominant electricity provider in the Basin, approximately 12 percent of their current portfolio qualifies under the RPS rules and thus the gain by 2020 would be approximately 21 percent. Since publication of the Draft EIR, an error in the footnote numbering of this table has been discovered and has been revised, as shown in Chapter 3 of this Final EIR.

Response 56-39

The comment asks how buildings with historic significance are currently protected. Please see response to Comment 10-10 for a description of existing regulations and procedures in place to protect historic structures.

Response 56-40

The comment summarizes an exchange between the Planning Commission and City staff during which it is explained that the Historical Society was consulted during the preparation of the Draft EIR.

Response 56-41

The comment states that Figure 4.5-1 presents an oversimplified depiction of faults. This figure only shows major faults in the region, and is not meant to show local faults. Please see response to Comment 7-9 for a discussion of maps showing local fault characteristics.

Response 56-42

The comment states that the Planning Commission did not have any questions on Chapter 4.6, Hazards and Hazardous Materials. No response is necessary.

Response 56-43

The comment asks for an explanation of what FEMA regulations mean in terms of restrictions on uses in areas designated in the 100-year flood zone.

FEMA designates areas at risk of flood hazard, as described on page 4.7-11. The Lafayette Municipal Code establishes measures to prevent damage from flooding, particularly in areas most prone to flooding as identified by FEMA. These measures, described in the Draft EIR on pages 4.7-5 and 4.7-18 through 4.7-21, include: prohibiting the construction of housing or the placement of structures which would impede or redirect flood flows within the 100-year flood hazard area; controlling alteration of natural protective barriers to flooding and regulate grading, dredging, and other development activities which can increase flood damage; controlling the construction of flood barriers which unnaturally divert flood waters or increase flood hazards in other areas; and prohibiting the alteration the existing drainage pattern in a manner which would increase the rate or amount of surface runoff and result in flooding.

Response 56-44

The comment summarizes an exchange between the Planning Commission and City staff regarding the CEQA process. The comment does not address the adequacy of the Draft EIR. No response is necessary.

Response 56-45

The comment refers to intersections that are already operating at LOS D or greater, and asks how these intersections would be affected by the Plan. The peak hour delays in seconds for each study intersection shown in Table 4.13-15 on page 4.13-36 of the Draft EIR for the Cumulative with Specific Plan Project scenario can be compared to the delay results shown in Table 4.13-5 on page 4.13-16 for Existing conditions, to evaluate the increases in peak hour traffic congestion at each intersection in the future under the Plan as compared to existing conditions. Please also see response to Comment 56-45.

Response 56-46

The comment summarizes an exchange between the Planning Commission and EIR consultants in which it is explained that Cumulative traffic includes traffic from all projected development over a 20-year horizon, and increases in peak hour delay at the Moraga Road/School Street intersection in the fu-

ture with the Plan compared to existing conditions are described. Additionally, the point of reference for determining significant impacts of the Plan is the increase in intersection delay or unacceptable deterioration in LOS between the Cumulative No Project LOS results in Table 4.13-11 on page 4.13-29 and the Cumulative with Specific Plan Project LOS results (Table 4.13-15 on page 4.13-56). Please also see response to Comment 4-13.

Response 56-47

The comment summarizes an exchange between the Planning Commission and EIR consultant during which the buildout numbers for the No Project Alternative are explained. The No Project Alternative represents a scenario in which the Plan Area would develop under the General Plan rather than the proposed Plan. The No Project Alternative buildout projections reflect this scenario, and only include development in the Plan Area, not citywide development.

Response 56-48

The comment summarizes an exchange between the Planning Commission and EIR consultant. During the exchange, it is explained that the assumption that development would build out to 80 percent of maximum development was used for the proposed project projections but not for the No Project Alternative projections.

Response 56-49

The comment summarizes an exchange between the Planning Commission and EIR consultants in which it is explained that the terms “good” LOS D and “poor” LOS D were used in the Draft EIR traffic analysis as defined in the City’s General Plan. Additionally, Table 4.13-1 has been revised to include the definition of these terms, and is presented in Chapter 3 of this Final EIR.

Response 56-50

The comment summarizes an exchange between the Planning Commission and EIR consultants in which it is explained that the traffic analysis for the

Cumulative No Project and the Cumulative with Specific Plan Project scenarios includes traffic from all other projected development, including future development plans in Moraga and neighboring communities.

Response 56-51

The comment summarizes an exchange between the Planning Commission and EIR consultants in which the transit reduction factor (Table 4.13-6, page 4.13-20) used in the trip generation for future development in the Plan Area is explained. Additionally, the transit reduction factor was applied to the total trip generation based on the ITE rates for residential and office land uses for the AM, mid-day, and PM peak hours daily. (No transit reduction factor was applied to retail use trip generation.) Please also see response to Comment 9-140.

Response 56-52

The comment summarizes an exchange between the Planning Commission and EIR consultants in which it is explained that the percentage of the transit reduction factor (Table 4.13-6, page 4.13-20) varies depending on the proximity of future development sites in the Plan Area to the BART station. Please also see responses to Comments 9-140 and 56-53.

Response 56-53

The comment summarizes an exchange between the Planning Commission and EIR consultants in which it is explained that the percentage of the transit reduction factor (Table 4.13-6, page 4.13-20) varies depending on the proximity of future development sites in the Plan Area to the BART station. Please also see response to Comment 9-140.

Response 56-54

The comment summarizes an exchange between the Planning Commission and EIR consultants in which it is explained that with application of the transit reduction factor menu in Table 4.13-6 (page 4.13-20), the resulting overall percentage of the transit reduction to the total trip generation for future de-

velopment in the Plan Area based on the ITE rates was no more than 6 percent. Please also see responses to Comments 9-140 and 27-7.

Response 56-55

The comment summarizes an exchange between the Planning Commission and EIR consultants in which it is explained that in Table 4.13-10 on page 4.13-25, the 730 residential dwelling units generate more trips than the 138,000 square feet of retail in the AM and PM peak hours because the proportion of the residential area is much higher than the retail area. Additionally, retail trip generation rates are generally higher than residential trip generation rates when compared on a square footage basis.

Response 56-56

The comment asks whether it is true, as stated on page 4.8-6 of the Draft EIR, that Golden Gate Way has the largest concentration of auto-related and light industrial uses. Existing land uses in the Plan Area are shown in Figure 4.8-3 of the Draft EIR. Auto-related commercial and light industrial uses are scattered throughout the Plan Area but are primarily found in the eastern portion of the Plan Area. The text on page 4.8-6 of the Draft EIR has been revised accordingly, as shown in Chapter 3 of this Final EIR.

Response 56-57

The comment asks whether the height limit for Moraga Road is 35 feet. Please see response to Comment 10-9. The maximum height for Moraga Road is 35 feet, subject to certain additional restrictions.

Response 56-58

The comment summarizes statements made during the meeting that do not address the adequacy of the Draft EIR. No response is necessary.

Response 56-59

The comment states that existing fire protection response is slower than it is supposed to be under the General Plan. The comment asks whether the impact in the Draft EIR is only based on whether the impact would get worse

compared to existing conditions. As stated on page 4.11-5 of the Draft EIR, impacts associated with the Plan would be potentially significant due to the potential for new development under the Plan to adversely affect fire protection services. The Draft EIR includes Mitigation Measure PS-1 to require a new fee on development to reduce this potential impact to a less-than-significant level.

Response 56-60

The comment summarizes an exchange between the Planning Commission and the Community Development Director during which the question of whether EBMUD has sufficient capacity to accommodate additional development is raised. It is explained that past capacity issues have been resolved by EBMUD and that the Draft EIR presents accurate, up-to-date information obtained from EBMUD. No response is necessary.

Response 56-61

The comment summarizes an exchange between the Planning Commission and EIR consultants during which it is explained that the traffic volume on School Street at its intersection with Moraga Road as shown in Figure 4.13-3 is correct. No response is necessary.

Response 56-62

The comment summarizes a request from the Planning Commission for illustrations of the cross-sections for Brook Street and School Street, which are recommended Bicycle Boulevards in the City's Bikeways Master Plan, relative to accommodating space for bicyclists. Please see response to Comment 10-20. The requested illustrations are beyond the required scope of a programmatic EIR. When specific development applications and roadway improvement projects are proposed, additional information at this level of detail would be warranted.

Response 56-63

The comment summarizes statements made during the meeting that do not address the adequacy of the Draft EIR. No response is necessary.

Response 56-64

The commentor refers to a list on page 5-2 of the Draft EIR describing the No Project Alternative. The comment states that the revision to the City's tree protection standards has already been completed. The commentor is correct that the City amended its tree protection standards through Ordinance 593, adopted on March 22, 2010. This ordinance was adopted after the preparation of the Draft EIR, therefore it was not possible to assume that this ordinance would have already been adopted in the Draft EIR. The ordinance does not include the 24-inch standard or any other recommendation included in the Plan, as the Plan was only in Draft form and not yet adopted at the time. If, however, the 24-inch standard remains in the Plan and/or there are other policies regarding trees, then the Ordinance would be amended again.

The comment states that many of the items on this list could be done at any time, regardless of whether the Plan is adopted. It is true that the City can pursue individual aspects of the Plan at any time without the Plan. Nevertheless, at this time these individual aspects are being proposed as part of the proposed Plan and the purpose of the No Project Alternative is to consider what would occur if the Plan were not adopted. The Draft EIR's No Project Alternative cannot assume that certain individual aspects of the Plan would be independently adopted as part of future projects.

Response 56-65

The comment reiterates the points made in the previous comment. Please see response to Comment 56-64, above.

Response 56-66

The comment asks why the buildout projections for the No Project Alternative and Lower Intensity Alternative are so different, and asks how the Lower Intensity Alternative achieves its projected amount of development. The buildout projections for the Lower Intensity Alternative were calculated using the same methodology as used for the Plan, adjusted to account for differences in allowable building heights and intensities. The No Project Alterna-

tive, however, was calculated using a different approach. Please see response to Comment 7-7.

Response 56-67

The comment states that Table 5-2 of the Draft EIR is telling. The comment expresses the opinion of the commentor and does not address the adequacy of the Draft EIR. Therefore, no response is necessary.

Response 56-68

The comment questions the finding on page 5-19 of the Draft EIR that the No Project Alternative would result in slightly deteriorated aesthetic conditions compared to that of the Plan. Please see response to Comment 9-153.

Response 56-69

The commentor refers to a statement on page 5-20 of the Draft EIR and asks what is meant by future growth occurring elsewhere. The greenhouse gas evaluation only looked at emissions that would be influenced by land use planning (or growth) in the Plan Area. Under the No Project Alternative, lower greenhouse gas emissions would occur in the Plan Area because there would be less growth in the Plan Area. However, growth outside of the Plan Area could consequently be greater because growth would need to be accommodated elsewhere. Therefore, regionally, there may be less or greater emissions depending on where and how the growth occurs.

Response 56-70

The comment suggests that the General Plan does not increase walking and bicycle riding. The General Plan includes several policies and programs to provide an attractive system of walkways, which would not be amended in the No Project Alternative. These policies include implementing the Master Walkways Plan, which identifies criteria for walkway route selection and completion, and lists street locations recommended for inclusion in the Capital Improvement Program. However, the No Project Alternative would not adopt the proposed Plan's more clearly elaborated policies and programs to promote pedestrian safety and mobility and develop more walkway connec-

tions that would potentially improve pedestrian conditions. Although the No Project Alternative does not preclude the adoption of these policies in the downtown, the Plan goes much farther in its description than current adopted pedestrian policies and walkways plans.

The General Plan also includes a policy and several programs to encourage bicycling by making it safer and easier, including updating the Bikeways Master Plan, a comprehensive document with recommendations for additional bikeways and bicycle support facilities and programs. The policies in the Specific Plan do not differ substantially from the City's Bikeways Master Plan, which would remain in effect under the No Project Alternative.

Response 56-71

The comment reiterates Comment 56-68. Please see response to Comment 56-68, above.

Response 56-72

The comment summarizes an exchange between the Planning Commission and City staff in which it is explained that an emergency plan is in place in the event that the Lafayette Reservoir dam breaks. Please see Comment 51-1 for details regarding emergency response plans for such an event.

Response 56-73

The comment states that the evaluation of the No Project Alternative should provide a more thorough assessment of how policy guidance would differ under the alternative. The evaluation of the No Project Alternative does consider the fact that for many environmental topics, existing City policies and regulations would remain in effect and would be adequate to avoid certain impacts. Nevertheless, there are some environmental topics for which policies proposed by the Plan would provide a policy framework specific to the downtown. This specific policy framework would provide more tailored policy guidance for future infill development in the Plan Area than the No Project Alternative. The Draft EIR has been revised to state this point more clearly, as shown in Chapter 3 of this Final EIR.

CITY OF LAFAYETTE
DOWNTOWN LAFAYETTE SPECIFIC PLAN EIR
COMMENTS AND RESPONSES

Response 56-74

The comment summarizes statements made during the meeting that do not address the adequacy of the Draft EIR. No response is necessary.

**City of Lafayette
Planning Commission
Meeting Minutes**

Monday, March 15, 2010 • 7:00 pm

Lafayette Library and Learning Center • 3491 Mount Diablo Boulevard • Community Hall

CALL TO ORDER

Chair Chastain called the meeting to order at 7:00 pm.

ROLL CALL

Present: Chair Chastain; Vice-Chair Curtin-Tinley; Commissioners Maggio, Mitchell, Lovitt, Ateljevich, and Humann

Absent: None

Staff: Ann Merideth, Community Development Director; Niroop Srivatsa, Planning & Building Services Manager

ADOPTION OF AGENDEVELOPMENT AGREEMENT

Commissioner Maggio moved to adopt the agenda as written. Commissioner Lovitt seconded the motion which carried by unanimous consent (7-0-0).

PUBLIC COMMENTS

None

CONSENT CALENDAR

MARCH 1, 2010 DRAFT MEETING MINUTES

HDP12-09 HOLLMAN BOLOGNA ARCHITECTURE (APPLICANT), MELCOR HOMES (OWNER), LR-5

ZONING: Request for a Phase I Hillside Development Permit pursuant to Section 6-2005 (a)(8) of the Lafayette Municipal Code (LMC) for siting and massing determination, (2) Exception for Development within a Class II Ridgeline Setback, pursuant to Section 6-2027 LMC, and (3) Exception to exceed the height limitation based on the 15° declination requirement to construct a new ~5,100 sq. ft., two-story single-family residence with a maximum ridge height of ~32 ft. within the Hillside Overlay District and within a Class II Protected Ridgeline Setback, located at 20 Reliez Valley Court. APN 167-050-011. Once house siting and massing have been established by the Planning Commission, the applicant will submit full design Plans for a Phase II Hillside Development Permit and public notification will be provided again at that time. Only establishment of an appropriate house site and mass is under consideration at this time

Recommendation: Continue, without discussion, to the Planning Commission meeting of April 5, 2010 to allow the applicant additional time to respond to the Commission's comments.

Project Planner: Lindy Chan, Tel.(925) 299-3202 • lchan@lovelafayette.org

Commissioner Mitchell moved to adopt the Consent Calendar. The motion was seconded by Commissioner Maggio which carried by unanimous consent (7-0-0).

CONTINUED PUBLIC HEARINGS

DOWNTOWN SPECIFIC PLAN – DOWNTOWN DRAFT EIR

Recommendation: Conduct the public hearing, and provide comments and questions for the Final EIR.

Project Planner: Ann Merideth, Tel. (925)299-3218 • amerideth@ci.lafayette.ca.us

57-1

1 Ms. Merideth said staff does not have a presentation tonight. This is a continuation of what they started on
 2 March 1st. This public hearing offers an opportunity for the public to make comments and questions on the
 3 Draft EIR which will be answered in the Final EIR. It also gives the Planning Commission the same
 4 opportunity to ask questions and comments that they would like to see addressed in the Final EIR. Alexis
 5 Lynch, who is the Project Manager, is here to listen to the questions and comments. Ms. Merideth said she
 6 is taking them down. We are here to answer questions about process and procedures.

7
 8 Commissioner Mitchell said we skipped over the Downtown Residential District. Are we going to come back
 9 to that? In the Residential District, it says 35 units by right. He asked for a clarification of what “by right”
 10 means. Ms. Srivatsa responded that the Downtown Residential District is coming back at first meeting in
 11 April. She asked if he was referring to the Draft EIR where it refers to 35 units by right? It means 35 units at
 12 maximum density allowed in a particular zoning district. Commissioner Mitchell said in some places it does
 13 not specify 35 by right. It seems to imply 35 by right. It still has to go through a review process, and the
 14 actual density might be a lesser number? Ms. Srivatsa responded that is correct.

57-1

15
 16 Chair Chastain opened the public portion of this item. He said the purpose of this hearing is to allow the
 17 public to offer comments directed to the consultant to address in the Final EIR.

18
 19 Mark Zemelman said he works for a medical care program. In the medical business, we are trying to
 20 improve quality by evidence-based medicines. Evidence-based medicine means the quality of outcomes of
 21 various treatments, in other words, the impacts. The key is look at all impacts. In the government sphere,
 22 the EIR is the same thing. The goal is to identify all significant impacts. Unfortunately, the Draft EIR does
 23 not identify all significant impacts. It is woefully deficient. If you take 4.11, its evaluation of schools, it only
 24 talks about one impact. It says there will be a 19 percent increase in the population of Lafayette, but it
 25 evaluates only one impact. That impact is the number of facilities that you need. It dismisses this impact,
 26 saying that developer fees will take cover it. This is remarkably superficial. Developer fees often do not
 27 cover all facilities, particularly if you are talking about high density housing, where developer fees are on
 28 square feet basis. In high density housing where you have lots of children, the fees are not enough.

57-2

29
 30 Mr. Zemelman asked what else does the Draft EIR overlook? For a starter, there is the impact on operating
 31 expense. The State has cut its per child amount it reimburses us to educate a child. In Lafayette, we now
 32 receive only 80 percent of what it takes. As you add each new child, you increase your deficit. That was not
 33 evaluated in the EIR.

57-3

34
 35 Mr. Zemelman said another impact is access to the schools. The Draft EIR notes that there is an increase
 36 in traffic, but no evaluation of that impact is on Lafayette Elementary or Stanley Middle School. Nor does
 37 the EIR evaluate the possibility of safety concerns raised by the additional traffic on schools.

57-4

38
 39 Mr. Zemelman said, for the purpose of today’s meeting, he is not taking a position on the ultimate merits of
 40 growth in our community. He is not taking a position on the merits of the Downtown Plan. Rather, if we are
 41 going to have an EIR, it is something we can all discuss. You have to have an EIR that looks at all the
 42 impacts. This one does not. He made one last point. The last time he asked that the EIR address the
 43 impact on operational costs of the schools, Commissioner Lovitt said that he had raised an important point,
 44 that it would be worth studying. Since then, the State, and the study does not which he understood was a
 45 change made afterwards, the State slashed funding even further. You just have to look at last Friday’s
 46 *Contra Costa Times*, huge cuts. This is serious. Lafayette has had to make major cuts in its budget as well.
 47 This is serious. This is a real impact. It is hitting us and everybody in the state. To not include it in the EIR
 48 is just negligent.

57-5

49
 50 Commissioner Mitchell asked if all the speakers’ comments will be sent to the EIR consultant and that they
 51 will be addressed in the Final? Ms. Merideth said yes, the minutes of both meetings will be in the EIR.

57-6

52
 53 George Wilson said when he and Avon chose Lafayette for their home 40 years ago, it was just two years
 54 after the community has organized and incorporated as a city. One of the main concerns that led to
 55 incorporation was the number of high density multifamily residential developments the County was forcing
 56 on the community. The last straw was the County approval of the Lafayette Highlands apartments. This

57-7

1 was contrary to the residents' desire to have a semi-rural, low density residential community. In the early
2 years of the city, the desires of the community were followed explicitly. The City Council and Planning
3 Commission were set up as volunteer groups. The City staff was the City Manager, a planner and a few
4 assistants. All other services were contracted. We recently had a survey completed which confirmed that
5 the issues most important to the residents are preserving open space, repairing streets, and improving
6 education. These were followed by reducing traffic, reducing congestion, reducing crime, preventing local
7 tax increases, and fostering a village-like environment in the downtown area. All these are consistent with
8 and restatement of the original goals of incorporation.
9

**57-7
cont.**

10 Mr. Wilson continued that we are debating a Plan that will increase residential density in the downtown,
11 increase traffic congestion and be the opposite of a village-like environment or a semi-rural community.
12 What would Ernie Marinner say? The proposed DSP should be rejected because it is not consistent with
13 the goals and desires of the Lafayette residents, not in 1968 and not now. He urged them to select the No
14 Project alternative, and recommended reverting to the existing General Plan.
15

57-8

16 Thomas Judson said thanks to the Planning Commission and interested parties for being here tonight to
17 listen to the concerns from the citizens. He is particularly concerned about air quality, Section 4.2. As a
18 Lafayette homeowner, he is concerned about the quality of life for the present and future residents of the
19 Lafayette area, which include a good number of those here tonight, friends, family, and businesses we do
20 business with. Reading the EIR, Table 4.2-5, he said he is worried about the cancer risks along Route 24
21 and other health risks. The California Air Resources Board recommends a 500-foot setback from each side
22 of the freeway for sensitive receptors, such as children, people with breathing concerns, and the residents
23 that are there. In further looking at the EIR, he is wondering about the mitigation and it is described on
24 pages 4.2-3, -4, and -5 and whether it is realistic. It seems to propose that the residents of the planned
25 residences will be indoors most of the time protected by air filtration systems which are consuming energy
26 which will add to the air emissions. It does not sound like a very healthy lifestyle. It also sounds like a
27 precursor to what years ago was called "sick building syndrome" where you closed and locked your
28 windows and sat inside with mechanical systems supposedly making it healthy for you. We all know how
29 that worked out. Based on this current EIR, one must wonder what the City of Lafayette plans to do to
30 protect both present and future citizens against known health risks while at the same time protecting our
31 City from liability. He looks forward to learning more about the action that the Planning Commission is
32 planning to take and eventually the action that the City Council plans to take.
33

57-9

34 George Burt said he has a very simple request. You have the heard the complaints, you have seen the
35 complaints in writing, that there have been reductions made, various kinds of reductions. One of the things
36 that is concerning us is very shortly we are to meet with you again to talk about the merits of the project.
37 We cannot possibly, nor can you, understand how to discuss the merits of the project unless we
38 understand the implications of the project. They ask you, it is your duty and responsibility as
39 representatives of Lafayette under State law of California, to determine tonight whether this Draft EIR is
40 adequate to move to the next stage. You can turn it back. You can direct it to be added to, changed,
41 modified, and come back to this room. That is what we ask you to do.
42

57-10

43 Bobbie Frietas listed her properties and said that they are what they pay taxes for. We hope we are
44 represented the way we want to be. She is concerned that we are not being represented the way we would
45 like to be given we all want a healthy environment and we want to make it good for all the children of the
46 future. She said she hoped that they would be concerned about the EIR. Why did we ask them to look at it
47 if we are not going to pay any attention to what they say to us? She does not understand that. She is a
48 businesswoman, and when they tell you something, you should listen to it, follow it, and do it for the health
49 of the community and the people here.
50

57-11

51 Maeve Pessis, representing the Lafayette Homeowners Council, said the Lafayette Homeowners Council
52 has put into lot of time and effort into studying the EIR. They provided 157 comments in about 15 technical
53 areas plus six comments in their cover letter, and they want to make sure the consultant responds to them.
54 In their conclusion, she wanted to point it out again. She understands that it is part of the staff report. She
55 hopes they have had a chance to go over that. They wanted to note they will continue to follow the review
56 process because they think it is so important. Even though it appears at this time the Draft EIR and the poll

57-12

1 of our residents, which the Godbe poll will verify, they are both pointing to the No Project alternative and
2 that we revert to the General Plan as the proper way for the City to proceed. The Godbe poll and the Draft
3 EIR both come to the same conclusion that Lafayette residents do not want 4,500 or more people living in
4 the downtown with more traffic, noise, and pollution. If she may speak personally, she noted that studying
5 this that a number of the mitigations refer to stop lights as a solution to traffic problems where stop lights
6 are not going to do the trick. She agreed with the first speaker that when we speak of schools we talk about
7 developer fees that would exist in perpetuity for the residents which she found disturbing. She had one
8 other item that Lafayette is an earthquake zone, shear zones are here, and she would hope that would be
9 included in comments to be dealt with when they are speaking with the consultant.

57-12
cont.

57-13
57-14
57-15

11 Eliot Hudson referred to the Vision Statement. He said the Vision Statement in the Specific Plan for the
12 downtown is create a downtown, with small town character and a sustainable quality of life that includes a
13 central core, pedestrian relationships between services, and is a place where residents can congregate,
14 shop, enjoy cultural activities, conduct their civic affairs, and savor the beauty and ambience of a small
15 town. He asked have we lost track of that completely? He said he hopes not, because if you read this Draft
16 EIR and look at the things that it does not even acknowledge. The views that are going to be lost, the views
17 at the Safeway block, but they do not show the buildings up to the curb the way they could be built.

57-16

19 Mr. Hudson continued if you look at under the General Plan and what we are going to have in the
20 diminution of air quality, and continuing increases in traffic congestion. Where is this small town ever going
21 to survive? When this process started, the Commission said that it would look at the greatest potential
22 impacts because we could always build down from there. This Draft EIR does not keep faith with that
23 promise and look at greatest potential impacts. It hedges, it cooks the books, it does not have the views it is
24 supposed to have. It should accurately reflect the maximum buildout. It should go back and be recreated so
25 it does show what they promised, to look at the maximum impacts. He would suggest that we will never
26 save this small town unless they do something else, and that is it is time to acknowledge what the
27 Homeowners Council warned about at the beginning of this process and that it has warned about since
28 May when it asked for lower density alternatives to be considered with the General Plan, and it is time to do
29 that.

57-17

31 Traci Reilly said she sent a letter. She said there are three things, three concerns with the EIR. The
32 population growth proposes 19 percent to a town that only saw less than one percent in the last decade
33 which is quite a dramatic difference. That is almost 5,000 new residents to our downtown area. With this,
34 they bring cars. They have children, and they are trying to transport them to things in the downtown area,
35 the drop-off, the pick-up. She said her children go to Lafayette Elementary and Stanley. She is in this traffic
36 constantly. It is already bad, it will only get worst. These are quality of life issues for residents that currently
37 live here. She did not move here for this, and others did not either. It really needs to be considered. The
38 bulk of the buildout on Mount Diablo between Moraga Road and Mountain View, that is already bad. Try
39 going to Diablo Foods at 4 or 5 in the afternoon, and they will see what she is talking about. Traffic is
40 already at major concern as it is now.

57-18

42 Ms. Reilly said the other is public safety. She sits on the Crime Prevention Commission. They have all
43 listened to Steve Falk stating that in Contra Costa County Lafayette has the lowest per capita number of
44 officers in this area. In the EIR it states there is no mitigation. They are not planning to add any more. If we
45 already have a very low number of police officers, which at night is two, we are adding 5,000 more people
46 without any suggestions about adding more. That is wrong, it is a public safety issue, one the EIR is not
47 addressing. This needs to be rethought. She does not think it is a good project for the reasons stated.
48 Quality of life, while it does not bring money to the City, it has a huge impact on people, and we want
49 people to continue to move here. She said she hopes they rethink this because it is going to have some
50 negative ramifications. It is not going to be a positive step for this community.

57-19

52 Susan Callister said she had a procedural question. On the agenda, number 6 is comments on the EIR,
53 and there is 8, Other Business, which is a discussion of the Downtown Plan review process. Some of the
54 people are here will leave before number 8 need to know. She asked are they going to take all the
55 comments they have so far and have the consultant respond to them and have one Final EIR? Or do they
56 believe this needs another Draft? That needs to be discussed because of all the comments from the

57-20

1 Lafayette Homeowners Council and others. Then we saw the gift from God, the Godbe report, which we
2 honestly did not pay for. It was very nice for the City to do that. It reached the same conclusion as the Draft
3 EIR – revert to the General Plan, leave things as people like them. Bottom line is are they going to have
4 another Draft EIR before they go into the Final for the public to review? She said she is not going to ask
5 what their conclusion is right now, but if they are going to revert to General Plan, No Project alternative,
6 fine, jump to the Final EIR. If there is still some question in their minds if they are going to go forward with
7 this Plan, then we need another Draft EIR for the record if they are going to along this trail.

**57-20
cont.**

8
9 Commissioner Lovitt moved to close the public hearing. Commissioner Maggio seconded the motion, which
10 passed with unanimous consent (7-0-0).

57-21

11
12 Chair Chastain said they went through the document at the last meeting. He asked if there are any
13 additional comments that they want to forward to the consultant or any other commentary that people
14 would like to offer.

15
16 Commissioner Ateljevich said she had a concern. She would like the consultant to prepare a more detailed
17 analysis of how the General Plan figured out how much development under the No Project alternative.
18 There is something here which makes her wonder what the methodology is. From what it says in the DEIR,
19 it is very different from they used to calculate for this Plan. If we have comparisons, they should be between
20 apples and apples, and we clearly do not have that.

57-22

21
22 Commissioner Mitchell said he wanted to make sure he understood Commissioner Ateljevich. Are you
23 referring to the Plan and the 80 percent reduction, and she wanted apples with apples comparison with the
24 General Plan? Commissioner Ateljevich said no. She is talking about the description in Chapter 3 where
25 they describe the General Plan, in very loose terms, that came to x-number of residents, x-number of retail,
26 and x-number of office. They do not say if it was based on 20 years, 30 years. She said it was very unclear
27 to her. She wants to know side-by-side exactly that we are doing the same thing in comparison.

28
29 Commissioner Maggio said she is intrigued by the school funding questions that were raised in several of
30 the letters. Nothing is simple; it is a complicated issue. On one hand, we have parcel taxes to supplement
31 as a source of revenue what the schools receive from the State of California and that decrease based on
32 multifamily housing. On the other side of the equation, you have a decreasing student population right now.
33 It is cyclical and economic. What may represent 80 percent funding from the State could be less
34 percentage with fewer students. There is an economy of scale. There are economics to look at. What is the
35 amount of money coming from parcel taxes, and what would that implication be with an increase of high
36 density residential versus a continual decline in student population? None of us want to see schools
37 consolidated. We all have to look at where will that student population come from. It is a complicated issue.
38 You cannot just say that with more multifamily housing, we are going to have decreased revenue for
39 schools, because, in fact, if you see an increase in students, you are getting some funding from the State of
40 California. Without looking at the data, she does not know if that is good or bad. She would like to see a
41 little more data to analyze the situation.

57-23

42
43 Commissioner Lovitt said he wanted to expand on something Commissioner Mitchell said. The issue of
44 measuring the 80 percent buildout for the draft Plan versus something for the General Plan, he does not
45 know what that something is. It is still unclear. Can the Commission direct that all three potential Plans be
46 tabled on the same based analysis in one table of all three Plans. Commissioners Ateljevich and Maggio
47 agreed.

57-24

48
49 Commissioner Mitchell referred to the point George Burt brought up, he went a little further. He said there
50 were multiple reductions in there with an 80 percent reduction, a 10 percent reduction in another area, and
51 a 40 percent reduction in a third area. He asked staff if the General Plan is looked at 100 percent as
52 compared to the 80 percent for the proposed Plan? Ms. Merideth responded that as explained at the last
53 meeting, the methodology for the General Plan was different than for the three Plans. That will be
54 explained in more detail to make it clear for everyone.

57-25

55 Commissioner Ateljevich said she thought they need to do a side by side comparison based on the same
56 methodology being used in both instances. Otherwise, we learn nothing. Anyone could guess that more

57-26

1	development means more traffic. If they are going to make comparisons at all, they have to do apples with		57-26	
2	apples.			
3				
4	Commissioner Lovitt asked if they could direct that? Chair Chastain said yes, they just did.	cont.		
5				
6	Commissioner Maggio said the mitigation that is equivalent to shelter in place should be immediately		57-27	
7	rejected. The mitigation of keeping windows and doors closed to keep contaminants away is no way to live.			
8			57-28	
9	Commissioner Ateljevich mentioned the sound walls along Mount Diablo.			
10			57-29	
11	Commissioner Maggio asked a question of staff. Are they going to see a revised EIR based on the			
12	comments and recommendations that have come through the various commissions before they take any			
13	action? Commissioner Ateljevich said they only take action on the Final EIR. Chair Chastain said that he			
14	guessed that was not a question for staff.			
15			57-30	
16	Commissioner Humann said Commissioner Maggio hit on his question about schools. He would be			
17	interested. It was his understanding that enrollment is going to decline. It will be interesting to hear the data			
18	and how it will relate to that. She also stole his thunder on the second about the revised draft of the EIR			
19	which will include all the comments that people stated here tonight. He asked staff if that would be a			
20	second draft or a current draft with comments incorporated. Ms. Merideth responded that the Final EIR			
21	consists of two parts. Steve Noack, when he did the PowerPoint presentation at the last meeting, talked			
22	about this. It is the revised Draft document and the response to comments document. Those two			
23	documents together make up the Final EIR. Commissioner Humann said the last speaker asked us to		57-31	
24	consider a second Draft. Ms. Merideth said they will be considering the Final EIR. Chair Chastain said it is			
25	not a second Draft. At that point, they can accept it or not, and ask for additional work to be done.			
26				
27	Commissioner Humann asked Ms. Merideth to explain one more time why they are doing this because a lot			
28	of folks are saying why not leave things as they are. He thought they were required to do this under State		57-32	
29	mandates. He asked her to address the "why" question again. Ms. Merideth responded it has been almost			
30	four years now that the City Council held a public meeting about the downtown and some of the issues that			
31	would be facing the downtown. Those were the General Plan which calls for programs to be implemented			
32	for the downtown, such as updating the specific plans for the BART Block and Shield Block. The second			
33	thing was the Library. We anticipated that there would be a lot more interest in this part of the downtown,			
34	Golden Gate Way, East End, once the Library was built. We are already seeing that. To address what the			
35	future should be given the Library. The third thing was, at that time, and we are continuing to get interest			
36	from developers on projects in the downtown. The economy is cyclical, but we are continuing to get people			
37	interested in doing projects in the downtown. It was a way to be not reactive but to have a policy for what			
38	the community wanted to see in the downtown. Last, we are going to have redevelopment funds over the			
39	life of the plan, which goes to 2040. How do we spend those funds for improvements and affordable			
40	housing? Those are the four reasons.			
41			57-33	
42	Commissioner Mitchell said the public has been very generous in suggesting ways to make sure the EIR is			
43	adequate. They provided a lot of input here. He said he did not recall if two issues have been included. One			
44	is the walkways. They had a condominium project by the Hungry Hunter where they were proposing a path			
45	from Mount Diablo Court to Pleasant Hill Road. He said he saw that the Department of Transportation was			
46	weighing in on the EIR, so maybe they could provide an opportunity to address that. He did not recall if		57-34	
47	emergency response was really addressed. If and when there were a disaster in Moraga, a big fire or a big			
48	earthquake, and everybody in Moraga wanted to get our and emergency vehicles wanted to get, was that			
49	addressed in the EIR?		57-35	
50			57-36	
51	Commissioner Mitchell said that a great job was done on the presentation on districts. He wondered if there			
52	could be a presentation about mitigation measures so they could see what they looked like, and on			
53	corresponding thresholds and standards of significance.			
54			57-37	
55	Chair Chastain said he had one comment. He would like to remind everybody that the EIR is not the Plan, it			
56	is just information. As such, the full range of potential impacts can be judged across all the different			

1 projects. Even the higher density project has numbers that are important to look at and that is very helpful.
2 That said, it would be very helpful and give people confidence to look at the impacts, at least inferred, of
3 100 percent of the Plan or to describe very carefully why 80 percent or why the reductions were made in a
4 way that they can be argued and understood.

5
6 Chair Chastain said they do not have to vote on this. He closed the item, and forwarded all the questions
7 and comments to the consultants to include in the Final EIR.

8
9 Commissioner Ateljevich said she is not sure everyone understands that the EIR has to respond has to
10 respond to all the comments. It is important to realize that they are supposed to respond to everything. It is
11 not just that they put them in document form. They should answer the questions. Sometimes they just say
12 "so noted", which is annoying to people.

13
14 Vice-Chair Curtin-Tinley said she is not sure everyone understands how the process goes out from here.
15 But first she thanked everyone for coming out tonight, for spending their time explaining their concerns to
16 them and taking the time to provide very detailed written comments. It is greatly appreciated. All those
17 written and oral comments will be compiled, and there will be written responses to every written and oral
18 comments that were made on the Draft EIR. That will make up the Final EIR. That will be second volume.
19 Once they have that, and only until they have that information, can they as the Planning Commission make
20 a recommendation to the City Council. They are only the recommending body about what should be done
21 with that EIR. Should it be recirculated because there are impacts raised greater than they anticipated or it
22 was thought for some other reason. Until they get that information, they cannot make that recommendation,
23 and two of the speakers raised that issue tonight. Once they get the written responses to comments
24 together, they will look at the EIR as a whole, and move forward with that on the Plan itself. She asked if
25 staff has a general timeline on when the Final EIR might be available? That might be something we could
26 know, even it is general, no guarantees.

27
28 Ms. Merideth said the current schedule has the Final EIR coming out on April 30th, but staff and the
29 consultants need to go through all the comments after tomorrow and decide what needs to be done and if
30 that schedule can be met. As soon as they have a schedule, they will let everyone know.

31
32 Commissioner Lovitt asked one more question for Vice-Chair Curtin-Tinley. It might be worth expanding on
33 what sorts of comments she would expect to see to come back. How detailed they would be, what they
34 would extend to, what changes spark in the EIR itself? Vice-Chair Curtin-Tinley said she was not sure she
35 could answer that. There might be some comment that makes a typographical correction. Those will be
36 made if, in fact, they are correct. Obviously, there are questions about the 80 percent and 100 percent.
37 There will be written response on that, why the 80 percent number was identified or other numbers that
38 were mentioned. As Commissioner Ateljevich mentioned about where the General Plan came from, there
39 will be a written response to that so they actually see it.

40
41 Commissioner Mitchell asked a question about the agenda. He does not know the duration of Item 8.
42 Would it be appropriate to discuss this now while interested parties are still here? Is it worth modifying the
43 agenda? Ms. Srivatsa said that is a good idea because she did not think the applicant is here. She told
44 them to arrive late, so they can move to Item 8.

45
46 Commissioner Mitchell moved to amend the agenda to move Item 8 next. Commissioner Lovitt seconded
47 the motion which carried by unanimous consent (7-0-0)

48 OTHER BUSINESS

49 **DISCUSSION OF THE DOWNTOWN SPECIFIC PLAN REVIEW PROCESS**

50 **Recommendation:** Provide direction to staff.

51 **Project Planner:** Niroop Srivatsa, Tel. (925)299-3206 • nsrivatsa@lovelafayette.org

52
53
54
55 Ms. Srivatsa said we have had this item on almost every agenda because Chair Chastain wants to talk
56 about how the Commission is going to proceed with the Draft Specific Plan and present their

1 recommendations to the City Council. This is a draft schedule as they proceed with the review of the Draft
2 Specific Plan. All of this is subject to change. For the public's benefit, since October the Planning
3 Commission has been reviewing the downtown Districts, one District per meeting, and they came up with
4 preliminary comments on each of the Districts. They did not make any final recommendations. They have
5 one more District to complete, the Downtown Residential District.

6
7 Commissioner Ateljevich asked what if someone is for the No Project alternative. Ms. Srivatsa said that is
8 part of your review.

9
10 Chair Chastain said that will come up when they make their recommendations. They have not looked at
11 recommendations at all. They need a way to get through this information in a sound way. He and staff have
12 laid out this calendar to do just that. They need to finish up the downtown Districts. The next item is a
13 review of fundamental issues. He thought these are things that have come up in their discussions and
14 presentations that are key fundamental pieces of a Plan. It would be preferable to get out in front of them
15 somehow, and state what they think about them, what their position is. If they need additional information
16 about them, it can be tabled until they get that. He said, in his discussions with staff, that these seem to be
17 key pieces and principles. After that, he is proposing to go through a simple, chapter-by-chapter review,
18 looking at chapters and program pieces. The Final EIR emerges in June, and that may change what their
19 final recommendations are. But they should be having those discussions.

20
21 Chair Chastain said he would like to be able to table an item if they think they do not have the information
22 they need. For example, they would like to have a handle on parking and have a notion of what that parking
23 strategy would look like. The same applies to design guidelines. They will not a complete set of guidelines,
24 but they need to understand what they can expect from them to come to terms with some of the aspects of
25 the Plan. It is his understanding that that is underway now. It will feed itself into their discussions. He would
26 like to have the time to have a workshop on the Shield Block and Golden Gate Way with the property
27 owners and citizens to really look at those areas carefully and specifically. Not in some grand terms, but
28 concrete terms about what they want to happen.

29
30 Commissioner Ateljevich said there should be good mapping.

31
32 Chair Chastain said they have said those are two areas with real promise and ought to be looked at very
33 carefully in what they actually do with them. To take the time is time well-spent. At the end of that, they can
34 come back with a final set of recommendations, and they can direct staff to essentially redraft the Plan.

35
36 Commissioner Ateljevich said so they will not be forwarding the whole thing to Council in list fashion, but a
37 redraft? Chair Chastain said none of them can predict exactly what they will take on. There may be aspects
38 of the chapters that seem fine, but there may be parts that they want major input on in terms of new
39 information and redrafting.

40
41 Commissioner Ateljevich asked are they going to schedule a way to check in with Council periodically
42 throughout this process so that they understand what the Commission is thinking and going with things?
43 Chair Chastain said June 28 is on their schedule. At that point, they would have gone through a certain
44 number of things. They would have the Final EIR review. That would be a good place to report to the
45 Council on what they would be willing to recommend and what they would want to happen, even if the
46 details are not in place.

47
48 Commissioner Maggio asked if they are considering a joint meeting with Design Review about character
49 areas, possible guidelines? Chair Chastain said it is up to them. It is a terrific idea. When they talk about
50 guidelines, it will be very important. He also thought he would like to see them involved in these workshops
51 on very particular areas.

52
53 Commissioner Mitchell said they had talked about a parking committee and a commercial design guidelines
54 committee. They were told the parking committee was not ready to start yet because they have not
55 collected the data. Is there a reason the design guidelines committee could not start going? Do they have
56 an expected date for the parking committee, the collection of data? Ms. Srivatsa said at the last meeting

57-39
cont.

1 the Council gave the green light to proceed with these two tasks. She has a meeting with the Chamber this
2 week to talk about the parking inventory. She wants to make sure it is well-advertised. All that staff is going
3 to be doing over the next month or two is counting parking spaces and developing maps that they can all
4 use. Staff is doing the same thing with design guidelines. They have already started reviewing good
5 commercial design guidelines and setting up a library. It will take about a month or two to get ready. She
6 said she will report back to them at every meeting. When they are done with that, then let us talk about the
7 committees and getting them involved.

8
9 Commissioner Mitchell asked how long does it take to get people signed up for a committee or to know
10 about it? Would it be good to get the selection process started? Ms. Srivatsa said that is up to them, the
11 Planning Commission and the City Council. At this point in time, staff would prefer to work directly with the
12 Planning Commission and, with the design guidelines, with the Design Review Commission. They will also
13 keep the Circulation Commission involved because they have responsibility for on-street parking. She will
14 prepare status reports for all three groups. At this time, she does not see the need for a full-blown
15 committee working on it until they reach the point to start talking about analysis and recommendations.

16
17 Commissioner Mitchell asked if individual committee members are appointed by City Council? Ms. Srivatsa
18 said yes.

19
20 Commissioner Humann asked how many would she expect will be on the committee? Ms. Srivatsa said
21 she had not thought of the committee. She is thinking about base maps and how to let the public know
22 about the inventory.

23
24 Chair Chastain said the key for them is to have enough information so that they know what to expect in
25 terms of performance. To describe the elements they want to control, the outcomes that they arrive at,
26 these are key. Then they can engineer guidelines to meet them.

27
28 Commissioner Ateljevich asked staff how they see the process going forward with DSIMPIC, because they
29 are very interested in the update which they have been talking about for about 15 years. They could be
30 moving forward slowly with that as well. Ms. Srivatsa said staff recommended that the planning division
31 work on East End median locations in 2010 as a precursor to the DSIMPIC update. Commissioner
32 Ateljevich said DSIMPIC should be involved in that. Ms. Srivatsa agreed, and said that the Chamber should
33 be involved as well. But the City Council has deferred any new tasks in the Planning Division Work Plan
34 until the budget workshop. What staff is focusing on now are the 2009 tasks and the few new tasks
35 associated with the Downtown Specific Plan, those being the parking inventory and commercial design
36 guidelines. Come May, if staff does get approval to proceed, we recommend that the medians in the East
37 End are as important as Shield Block and Golden Gate Way. There is momentum. There is Chamber
38 support to at least begin the process. We should work with the businesses to not design continuous
39 medians, but beautify the East End while still allowing the businesses to thrive. But staff will not know if we
40 can proceed with this task until late May.

41
42 Commissioner Mitchell asked if the parking and design guidelines committees will come to fruition by June
43 7th or whenever the Final EIR review? Ms. Srivatsa said it could, but she does not know. They are in the
44 process of scoping the work for these two tasks. She is not comfortable saying yes. Commissioner Mitchell
45 said it would be helpful from his perspective if they could receive some information before the Final EIR
46 review. If the Final EIR review could be pushed back a little, he would be interested in getting the
47 information.

48
49 Chair Chastain asked for public comments on the schedule.

50
51 Marie Blits said they try to be prepared, try to ask good questions, try to look at the larger picture to help
52 work together. On the issue of the process, there is a lot of concern from their constituents about how all of
53 this is going to sync together. The concerns they heard earlier about the Draft EIR process while all these
54 comments that are going in from the commissions that the consultant is supposed to respond to in the Final
55 Environmental Impact Report. By then, in the middle of the summer, and there is a whole momentum to get
56 this done because it is on the schedule for the City Council to get it done this year. There is pressure on

57-39
cont.

1 staff to get it off their plate because it costs so much money. If they need more review and information from
 2 the consultant as to the mitigations and how all these pieces are going to fit together, there is going to be
 3 an awful lot of pressure to not ask for that at that point. Do something, and get it done to get it off your plate
 4 and get it somewhere else. That is a lot of the worry that in the meantime going ahead with the pieces of
 5 Plan at the same time as the EIR is not done. How is all of this going to come together when they have the
 6 Plan going ahead at the same time the EIR is going ahead to have them all come together at the same
 7 time? There are all these deficiencies in the EIR. It is hard to see how that is going to work in real life in a
 8 way that keeps faith with all the things they have to do.

9
 10 Ms. Blits continued that the EIR consultant is not a legal separate entity unto itself with power over them.
 11 They have power over it. They can give it much more specific instructions than have been going out at this
 12 point. They can tell the consultant that they want thorough and thoughtful responses to all of these issues
 13 that are being raised. Just saying noted or observed is not sufficient. That will not give back to them what
 14 they need to make these important decisions. They can take that bull by the horns and give them very
 15 specific instructions and give staff instructions that when they are working with the consultant that they
 16 make sure the consultant is coming back with really thorough responses to all these concerns raised by
 17 them and others.

18
 19 Eliot Hudson said he had a couple of things. First, on the review of fundamental issues, he said the
 20 reference to the 25-foot height limit ought to be revised. In all the comments that have been made, a lot of
 21 the people that put that number out as an initial comment, except in areas like Brown Avenue, are willing to
 22 abandon 25 feet and make it 27 feet because there is a consensus that it works better. It is misleading to
 23 leave it as 25 feet. More importantly, he does not know how they are going to review and confirm
 24 fundamental issues on April 19th when they are not going to have the Final EIR for two more months. It
 25 seems they have listed some very key issues here, and the decisions made on April 19th would be in a fact-
 26 free environment. They are not going to have the Final EIR back to evaluate those things and know
 27 whether they should be making those decisions at that point. Those decisions are the things that really
 28 have to follow the Final EIR.

29
 30 George Burt said the two previous eloquent speakers were saying what the outlook he testified about
 31 earlier in asking that they not move this forward and ask for a supplemental. Give them working room. The
 32 Final EIR comes at a very difficult point in the timeline. What they are asking is to bring back documents to
 33 them, recirculate, so they can all understand, massage and move forward. They asked a number of very
 34 astute questions this evening. They know there are tremendous amounts of documents, pages. It is going
 35 to take quite a bit to answer those questions. They will be very enlightening, and they may change their
 36 thinking, they might change the Commission's thinking. But they need the questions answered. They do not
 37 need a final document. They know they need a final document to move forward legally. They understand
 38 that. But they need working paperwork. The schedule they are discussing is without that paperwork, and
 39 they are very concerned. If there is something they can do to change the schedule to get responses to
 40 back to them, then they talk about all these things. They would be much better off. It is becoming a train
 41 wreck. They are becoming horrified about all these things that are going to happen on this date, that date. It
 42 is not fair. They are talking about something that will last 20, 30, in reality it will last a 100 years. How is the
 43 town going to continue to build and change. There is no point in rushing into it. The point is to do it
 44 thoroughly, and do it well.

45
 46 Bryne Mathisen said she wanted to move back and ask them to keep something in mind. They are saying
 47 that there will be declining enrollment and it will continue. When she moved here in 1979, that is what they
 48 all talked about and they consolidated schools. She knows from Happy Valley School, a group of parents
 49 were very active in the community and they were the ones that spearheaded it. They literally went door-to-
 50 door in the Happy Valley Improvement Association, and they asked how many children do you have, how
 51 many do you intend to have, and when were they thinking of having them. They showed they were actually
 52 going to grow. Since she has worked on Planned Parenthood, she knows they can plan those things.
 53 Please keep that in mind.

54
 55 Commissioner Lovitt moved to close the public comments. Commissioner Ateljevich seconded the motion,
 56 which passed by unanimous consent (7-0-0).

57-39
 cont.

1
2 Commissioner Mitchell asked, on April 19th, what is the nature of talking about the various principles?
3

4 Chair Chastain said he hopes that people do not do them the disservice of thinking they are so shallow that
5 they will not be paying attention to what they do not know. They are aware the Final EIR is out there. But
6 they need to talk about these things. These decisions, discussions have been going on since October.
7 They already have a lot to consider. It might tell them what they expect out of the EIR, and what they will
8 accept or will not accept. He said it is very important to have these discussions to begin to talk among
9 themselves. Where do they want to see this thing move forward. None of these items before they get the
10 Final EIR are in themselves not a final set of recommendations. But it all builds up, and they have to have
11 the discourse over some period of time.
12

13 Chair Chastain continued that these are shorthands. The Vision Statement. It is very important to start at
14 the beginning to really talk about what they are trying to accomplish and what they are not. It is right there
15 at the front of the Plan, and they need to reaffirm what parts they really want to bring forward and if they
16 want to change it. The Districts. They talked about reducing the number, but they have not made that
17 recommendation, and they will not. He wants to make sure they are still thinking there are too many, and
18 the ones they ought to have are the one they think they should talk about. It has a big effect on how they
19 continue to discuss the Plan. Density, that is a given. In the EIR, it brings to their attention that are plenty of
20 problems with additional density. They need to have a discussion on where they think this Plan should end
21 up. The 25-foot height limit is in the Plan. It is a proposal which has a lot of effect on property owners and
22 the character of the town. It will be helpful to understand where they really stand along those lines. The
23 menu of standards goes with it. They have not talked about that when they talked about the District plans.
24 That is a fundamental change in the way they do business. It is worth figuring out where they stand on it
25 now. Sustainability is likewise. There have been some questions about where it is in the Plan, and it will be
26 important to focus on where they are with it now. Focusing on key areas. It really alludes to what they have
27 talked about during their review that they ought to make sure that they are putting their energy and work on
28 places that will work. These things are overarching and touch on the chapters as well. It is sorting them out
29 up front.
30

31 Commissioner Lovitt said for a number of these things, a lot more than the EIR goes into, are the things
32 that they will be grappling with as they as go through the planning process. Some of these things will be
33 informed by the EIR, but a lot of them derive from the first thing on the list. He said Chair Chastain's
34 priorities are right.
35

36 Commissioner Maggio said the other benefit to having these discussions now is that they have the time to
37 prepare the City Council before what may land on their dais at the end of the process. Have those
38 discussions so that they do not disconnect at the end of the process.
39

40 Commissioner Mitchell said they are not going to come to a conclusion on all these issues on April 19th. It
41 will be an evolving process.
42

43 Chair Chastain agreed. If anything, it is just a straw vote. But it is helpful to ask the question. It prepares
44 their minds to ask better questions later
45

46 Commissioner Maggio said it will be an interesting night, and invited all to attend.
47

48 NEW PUBLIC HEARINGS

49 **FIFTH AMENDMENT TO THE TOWN CENTER DEVELOPMENT AGREEMENT**

50 **Recommendation:** Recommend approval to the City Council

51 **Project Planner:** Niroop Srivatsa, Tel. (925)299-3206 • nsrivatsa@lovelafayette.org

52
53
54 Ms. Srivatsa presented the item. The Town Center development is located at Dewing Avenue and Mount
55 Diablo Boulevard. It is a three-phase Planned Unit Development. Two phases are already built and
56 occupied. The third phase was approved for a 26,000-square foot office building. Over the course of

57-39
cont.

1 years, the City approved a change of use for a multifamily project in Phase III. Last year the Commission
2 had two joint meetings with City Council to look at KB Home's plans for an 80-unit condominium project.
3 KB Home is not ready with its application, and the Development Agreement for the entire Town Center
4 project expires in late May of this year. The property owners, Lafayette Residential Partners, and KB
5 Home are requesting that the DA be extended for three more years. That would give KB Home sufficient
6 time to file an application, get entitlements, prepare construction drawings, and pull a building permit
7 before the expiration of the Development Agreement.
8

9 Ms. Srivatsa continued that the Council subcommittee has met with Lafayette Residential Partners and
10 KB Home, and has come up with some terms for this extension. This would be the last extension, and it
11 would be for three years. They wanted to make sure the developer submits the application in a timely
12 manner so that he could pull building permits by the end of those three years. The DA establishes
13 deadlines for submitting the application. At the end of the term of the DA, if the applicant has not pulled
14 the building permit but has all the entitlements, the City would impose an annual penalty based on the tax
15 increment revenues that would have been received if a residential project were built in a timely manner.
16 State law requires the Planning Commission to make its recommendations to the City Council. There are
17 no findings that they need to make. Any comments they want passed onto the City Council are welcome.
18 Late this afternoon, she received a response from the attorney of Lafayette Residential Partners. He had
19 some comments on the terms, but no changes. The City Attorney and Ms. Srivatsa have had only the
20 briefest of conversations, and have not had the time to review the letter in detail. They are not
21 recommending any changes at this time. If changes are made and they are minor, the Commission's
22 recommendation will proceed to the City Council. If they make changes that are substantive, it will have to
23 come back to the Commission.
24

25 Vice-Chair Curtin-Tinley recused herself from this item. She did not want to interrupt staff.
26

27 Commissioner Lovitt asked how many DA extensions have been granted? Ms. Srivatsa said this is the
28 fifth. Commissioner Lovitt said it appears that David Bowie's letter involves issues of substance. Ms.
29 Srivatsa said it was her understanding that the terms had been negotiated. The applicant did receive the
30 draft Agreement before it was finalized and the staff report.
31

32 Commissioner Mitchell said over the past two years the real estate market has been difficult, but the prior
33 ten years was particularly good. What would be the outcome if they chose not to continue the
34 Development Agreement at this time? Ms. Srivatsa said if the Development Agreement expired, the terms
35 that were negotiated in 1998 would terminate. At that time, they were operating under the old General
36 Plan which did not have a height limit in the downtown. The applicant has not had to request an
37 amendment to the General Plan, only an amendment to the BART Block Specific Plan, which does have
38 a three-story height limit. If the DA were to expire, the applicant would have to seek amendments to the
39 current General Plan. There are other terms that were negotiated in terms of fees and exactions. Those
40 would go away, as well.
41

42 Commissioner Ateljevich said so what goes away is a greater benefit to the applicant. Commissioner
43 Maggio said he would be starting over under current regulations. Commissioner Ateljevich agreed.
44

45 Commissioner Mitchell said the developer currently has an approved office building. Ms. Srivatsa said
46 that is correct. Commissioner Mitchell continued that he could just build that. Ms. Srivatsa said yes.
47 Commissioner Mitchell asked if that would have any effect on the Development Agreement? Ms. Srivatsa
48 said no. The Commission approved the office building. She has reviewed the construction drawings and
49 approved them.
50

51 Commissioner Ateljevich asked if there were a time limit on taking out a permit on that approval? Ms.
52 Srivatsa said the deadline is the expiration date of the Development Agreement. If the DA were to expire
53 this year, the applicant would have to pull the building permits for the office building by May 30th. But
54 understanding that the applicant has already received approvals for the office building, there is no
55 incentive. He could let the DA expire, and there would be no consequence to that.
56

57-39
cont.

1 Chair Chastain asked if he does not have a building permit? Ms. Srivatsa said he does not have a
2 building permit, but he does have his entitlements. Chair Chastain asked he has not submitted for a
3 building permit? Ms. Srivatsa said he has submitted for a building permit. Planning has approved the
4 construction drawings but fees have not been paid.

5
6 Ms. Srivatsa said staff does recommend the approval of the fifth extension to the Development
7 Agreement.

8
9 Chair Chastain asked if it would make sense to continue this item to resolve what is in this letter? Ms.
10 Srivatsa said no, because they are on a very tight schedule. The City Council has to hear this item in two
11 sessions which would be in the month of April. Their approval would not become effective until the end of
12 May, which is when the Development Agreement expires. Unless the Commission has a special meeting,
13 she recommends that they act on the matter this evening.

14
15 Chair Chastain asked if they act tonight, this letter has no consequence? Ms. Srivatsa said if the City
16 Attorney determines that the changes are minor, it is fine. But if the changes are major, it will have to
17 come back.

18
19 Commissioner Mitchell asked if it were probable that Mr. Bowie would talk to the City Council, as well,
20 about these matters? Ms. Srivatsa said he will have that opportunity.

21
22 Chair Chastain opened the item for public comment.

23
24 Marie Blits said sometimes it helps to take a step back as they were all doing. This started back in 1998.
25 It is the Fifth Amendment to the Development Agreement. She has read them all. The Commission has
26 read them all. In this request, it really does extend it more than three more years, because it could be
27 extended if they read the actual Agreement. There is trigger that goes out 15 years. She read it three
28 times, and not sure she understood it exactly. There is also language about working cooperatively with
29 the developer to develop a streamlined process for the development application for Phase III even though
30 it has been undeveloped for 10 years, more like 12 at this point. Why does the City want to bend over
31 backwards to have an accelerated process to help approve something that predates the General Plan,
32 that will not be finished for another 15 years? What is the public policy in that if approved as requested?
33 She posed the question to the Commission and City Council if this is a good use of City resources? As to
34 that \$100,000 per year penalty, does the City want to get into property development? It is as though the
35 City is becoming a joint developer of the property, and it is stringing them along. At some point, a little
36 tough love is in order so they can all move on and do something else. Especially if there is going to be
37 another Specific Plan along with the BART Block Plans superseding the General Plan. Those are some
38 questions and food for thought.

39
40 Commissioner Mitchell said it is only the 12 years that have gone on with the three years for the total of
41 15 years. Ms. Blits asked what is it exactly that the three years does? They are all done in three years,
42 but there are other things that will happen beyond the three years. Even if they do not get to the \$100,000
43 trigger in 2013, it will have a way of inching, based on past history.

44
45 Ms. Srivatsa said there is a representative from KB Home.

46
47 Jeff McMullen with KB Home said last year there was joint study session with Council, Planning
48 Commission, Design Review Commission. They looked at a lot of plans, and came up with a plan that is
49 pretty close to what was envisioned for the site. They were directed through that process to submit an
50 application and continue the process with staff. That is what they are doing. They need the time in the
51 Development Agreement, and this extension does that. It gives them the time to do the studies that need
52 to be done, draw the architectural renderings, and go through process with the Planning Commission and
53 City Council for approval of the project and then prepare the construction drawings and pull the permit.
54 That process is what will take place in the three years. The extension is an accommodation for the
55 process that was set forth. He referred to the comments that Mr. Bowie put in. He apologized that they

57-39
cont.

1 are late. They do not think they are significant. They were meant to clarify things since they got the
2 Agreement late as well. As long as the City Attorney is comfortable with them, they all should be.
3

4 Commissioner Mitchell said the joint meeting was last May. Has there been movement since then? Mr.
5 McMullen said he thought the final meeting was in September. There have been internal things with the
6 property owners and the bank. KB has been working on the budget and market analysis study. There has
7 been a lot of internal stuff. They have done studies on the building, and put things together to bring the
8 architect back in to prepare the drawings. The Commission has not seen anything, but not for the lack of
9 effort.

10
11 Chair Chastain asked if they started today, how soon could the Commission see something? Do they
12 have a tentative schedule? They have three years, when would it come to them? Mr. McMullen said there
13 are dates in the letter. They would try to get all their things in by September 1st of this year, and the City
14 would be able to review those the fall of this year. That process could be wrapped up by the end of the
15 year. Generally this time next year they would have the entitlements, and six months to prepare the
16 construction drawings and then pull building permits. There is about six months of preparation work, three
17 months in the approval process with the City, another six months for construction drawings, and then the
18 building permit. Things could take a little longer, or move more quickly, but that is generally the schedule.
19

20 Commissioner Lovitt moved to close the public hearing. Commissioner Maggio seconded the motion,
21 which passed by unanimous consent (7-0-0)
22

23 Commissioner Lovitt asked where is the reference to the fast tracking? Ms. Srivatsa said this amendment
24 only changes a few things in the Development Agreement. The Settlement Agreement is where the
25 expedited process is explained.
26

27 Commissioner Lovitt asked if an extension of the DA is contemplated in the Settlement Agreement? Ms.
28 Srivatsa said no. Commissioner Lovitt said is there any reason for them to be tied to together to continue
29 the expedited approval process, which he objects to. Ms. Srivatsa said it is in the Settlement Agreement,
30 and that is the process they are expected to follow. This came out as a result of the litigation. If the
31 question is can they revert back to a regular process, that can be the recommendation back to the City
32 Council. It is not contained in this Agreement, but if that is a comment that the Commission would like to
33 make, that is within their purview. Commissioner Lovitt asked, because it is an extension, they are not
34 tied to it? Ms. Srivatsa said they are tied to it by the Settlement Agreement. The Commission has the right
35 to forward their comments to the City Council. If one of the comments is to take a look at the review
36 process, then it will be up to the Council if they want to do that.
37

38 Chair Chastain said to do that they would have to break the Settlement Agreement. Ms. Srivatsa said
39 they would have to amend the Settlement Agreement
40

41 Commissioner Lovitt asked why? Chair Chastain said it was his understanding it was a settlement that
42 resulted from litigation about the whole process, and both parties had agreed to it. Commissioner Lovitt
43 said his question arises because they have satisfied that and this extension is a new request. Ms.
44 Srivatsa said he raises a good point. By the Settlement Agreement, they were asked to hold these pre-
45 application meetings in a timely fashion to provide preliminary comments on the project, which the City
46 has done. They did not hold up the application for development, so it could be a negotiating point with the
47 property owner. Staff is not recommending that, but her comment is, if they want to pass that on to the
48 City Council, that is within the Commission's purview.
49

50 Commissioner Maggio said she could understand the support for this project. This housing option is
51 under-represented in Lafayette. It most likely it will be a sustainable project near a transit station. It is
52 something that they need to do. But she would only recommend the fifth amendment if it were the last
53 amendment.

54 Commissioner Mitchell asked if the Settlement Agreement was tied to the Development Agreement? If
55 the Development Agreement expired, then the Settlement Agreement would be moot? Ms. Srivatsa said
56 she could not answer that question, and would have to consult with the City Attorney.

**57-39
cont.**

1 Ms. Srivatsa said the property owners, Lafayette Residential Partners, were in the audience.
2
3

4 Commissioner Humann asked what would be the downside of not expediting the permit process? He said
5 he is not understanding the thinking of that. Ms. Srivatsa said the Settlement Agreement said each
6 Commission had a very limited time for reviewing the application. When it went to the DRC, the DRC had
7 45 days to review the application, forward it to the Planning Commission, and then onto the City Council.
8 Staff was part of the negotiations, and felt that the City has had many opportunities to look at this
9 application in two pre-application meetings. Staff felt comfortable that they could meet those deadlines.
10 They also have the CEQA process which has its own course. There are no limits on environmental
11 review. They could take their time to ensure that they did the environmental review correctly. Based on
12 that, the City was willing to enter into this expedited process. The intent and purpose from the very
13 beginning was that the City Council had expressed the desire have a high density residential project next
14 to the BART station. This was one way to achieve that in a timely fashion.
15

16 Commissioner Humann said what he is hearing is that the City feels that is able to approve this
17 expeditiously as this Planning Commission and City Council, or that they would not agreed to that. He
18 does not have a problem with it.
19

20 Chair Chastain said there are two issues that have been raised. One is to extend the Development
21 Agreement. He is okay with that because of the alternative that is sitting in the Building Department is an
22 office building. It is that simple in terms of extending the Development Agreement. Patience is gone, have
23 to get on with it. The property owners and developers want to get it going. He is okay with the extension
24 of the Development Agreement. The other issue that is part of the discussion and which is more
25 interesting is it possible to look at this in terms of the Settlement Agreement in terms of expediting the
26 process. He is open to forwarding comments about that. It raises the bar for the applicant because there
27 is not the time to massage, and to say they like this or they like that. They are shortening the process,
28 and all the criticism is up front. If they want this project and the developers know the concerns, there has
29 to be a quick meeting of the minds. The Settlement Agreement does not require them to agree, correct?
30 Ms. Srivatsa said correct, the applicant must still request an amendment to the BART Block Specific Plan
31

32 Commissioner Mitchell made a motion to reopen the public hearing. Chair Chastain reopened the public
33 hearing.
34

35 Rick Dishnica said he is a member of Lafayette Residential Partners LLC. He introduced another partner
36 Ivan Glover and Jeff McMullen from KB Home. He was there to answer questions. The Development
37 Agreement speaks for itself for the request.
38

39 Chair Chastain said there is nothing new, but it would be good to ask questions. There were no
40 questions.
41

42 Chair Chastain asked for comments about the other issue other than the Development Agreement. Is that
43 something they want to forward to the City Council, their thoughts about the Settlement Agreement?
44

45 Commissioner Ateljevich said she would be comfortable saying the Commission had concerns about the
46 Settlement Agreement and the expedited process, and let the Council make the decision.
47

48 Commissioner Mitchell said he would share that concern.
49

50 Commissioner Lovitt said there needs to be some resolution between the language concerns. He said
51 they probably would not have concerns about minor changes, but would have concerns about major
52 changes. In that respect, they would be adopting the staff recommendation.
53

54 Chair Chastain asked do they want a motion to adopt the extension and add on comments about the
55 Settlement Agreement? Or do they leave those out and forward them to City Council? Ms. Srivatsa said
56 they could make the motion on the extension itself and make a separate motion on any other comments.

57-39
cont.

1
2 Commissioner Ateljevich made a motion to approve the staff recommendation for the fifth extension of the
3 Development Agreement. Commissioner Lovitt seconded the motion.
4

5 Commissioner Mitchell said he would like to let people know why is his voting the way he is voting. He is
6 not going to vote in favor of an additional extension. The reason is that new information has come to light
7 via the downtown Specific Plan and the EIR. Part of the density was the transit reduction factor where it
8 said a lot of people would be taking BART, and the EIR said only 10-15 percent would be. The impacts
9 would be greater than originally anticipated, and he is not going to vote for the extension.
10

11 Chair Chastain asked for a voice vote. The aye votes were Chair Chastain, Commissioners Ateljevich,
12 Humann, Lovitt, and Maggio. The no vote was Commissioner Mitchell. The motion passed (5-1-1).
13

14 Commissioner Ateljevich made a motion to request that the City Council reconsider the Settlement
15 Agreement's expedited process. Commissioner Mitchell seconded the motion. Chair Chastain asked for a
16 voice vote. The aye votes were Commissioners Ateljevich, Lovitt, Maggio, and Mitchell. The no votes
17 were Chair Chastain and Commissioner Humann. The motion passed (4-2-1).
18

19 COMMISSIONERS' ACTIVITY REPORT

20
21 None
22

23 PLANNING MANAGER'S REPORT

24
25 Ms. Srivatsa said Commissioner Mitchell is scheduled to be the liaison, and there are two items that might
26 be of interest to the Planning Commission. The first are two units in downtown Redevelopment Project
27 Area, zoned MRA. The applicant is asking for an increase in the FAR. The Planning Commission felt that
28 the design was critical to them saying yes or no to this increase in the FAR so they referred it to the DRC.
29 The applicant is before the DRC with revised drawings. The second is a new house on Happy Valley Road,
30 about 9,500 square feet. There are some neighborhood concerns with privacy and compatibility.
31

32 Ms. Srivatsa said there is no liaison for April 12th DRC meeting. She asked for a volunteer. Commissioner
33 Mitchell asked if that was the same night as Seifel. Ms. Srivatsa said yes.
34

35 ADJOURNMENT

36
37 Commissioner Ateljevich moved to adjourn the meeting at 8:55 pm. Commissioner Maggio seconded the
38 motion, which carried by unanimous consent (7-0-0).
39
40
41
42

43 Respectfully submitted,
44



45
46
47 Ann Merideth, Community Development Director
48
49

57-39
cont.

LETTER 57

Planning Commission meeting, March 15, 2010.

Response 57-1

This comment letter presents the Planning Commission meeting minutes from March 15, 2010. This comment summarizes statements made during the meeting that do not address the adequacy of the Draft EIR. No response is necessary.

Response 57-2

The comment states that the Draft EIR is deficient because it evaluates only the impact on the need for additional facilities and does not consider other impacts on local schools. Please see response to Comment 18-10, which addresses a similar comment. No further response is necessary.

Response 57-3

The comment states that the Draft EIR is deficient because it overlooked the impact of an increased population on the operating expenses of local schools. Please see response to Comment 18-10, which addresses a similar comment. No further response is necessary.

Response 57-4

The comment states that the Draft EIR does not analyze traffic impacts to schools or safety concerns due to additional traffic. Please see response to Comment 47-4, above.

Response 57-5

The comment reiterates concern for the impact of an increased population on the operating expenses of local schools and states that the Draft EIR is negligent because it does not address this issue. Please see response to Comment 18-10, which addresses a similar comment. No further response is necessary.

Response 57-6

The comment summarizes an exchange between the Planning Commission and City staff during which it is explained that all comments on the Draft EIR will be sent to the EIR consultant and addressed in this Final EIR.

Response 57-7

The comment expresses the commentor's opinion on planning issues in Lafayette but does not address the adequacy of the Draft EIR. Therefore, no response is necessary.

Response 57-8

This comment expresses the opinion that the Plan should be rejected. The comment does not address the adequacy of the Draft EIR. Therefore, no response is needed.

Response 57-9

The commentor expresses concern about air quality impacts from State Route 24 and the effects of mitigation to reduce the impact with respect to creating "sick building syndrome." Please see responses to Comments 9-68, 9-71, and 9-77.

Response 57-10

The comment refers to reductions used in the buildout projection calculations and states that the public and Planning Commission cannot understand the merits of the Plan without fully understanding the implications of the Plan. As explained above in response to Comment 9-7, the buildout projections assume a high rate of redevelopment in the Plan Area and reflect what City staff and the EIR consultant team believe to be a high amount of development. City staff and the EIR consultant team do not expect that the buildout projections used in the Draft EIR will actually build out over the next 20 years, and instead used these numbers to provide an environmentally conservative analysis.

Response 57-11

The comment expresses concerns about the Plan and the impacts identified in the Draft EIR. The comment does not address the adequacy of the Draft EIR. Therefore, no response is needed.

Response 57-12

The comment states that the Lafayette Homeowners Council submitted a detailed comment letter. Please see responses to Comment Letter #9, above. The comment states that both the alternatives analysis of the Draft EIR and the findings of a recent poll indicate a preference toward the No Project Alternative. The comment does not address the adequacy of the Draft EIR. Therefore, no response is necessary.

Response 57-13

This comment suggests that the installation of traffic signals as mitigation at several study intersections would not be effective as a solution to traffic problems; however, no evidence is provided to justify this opinion. No additional response is necessary. Please also see responses to Comments 4-38, 4-42, 4-46, 4-48, 4-53, and 9-47.

Response 57-14

The comment expresses the commentor's opinion on developer fees and schools and does not address the adequacy of the Draft EIR. Therefore, no response is necessary.

Response 57-15

The comment states that Lafayette contains shear zones. Please see response to Comment 7-9.

Response 57-16

The comment states that the impact analysis in the Draft EIR does not reflect the vision statement of the Plan. The comment states that the Plan would block scenic views. Please see response to Comment 9-59, above. The Draft EIR does acknowledge that new development in some areas of the Plan Area

could affect existing scenic views. However, as described above in response to Comment 9-59, the Draft EIR does not find that this constitutes an overall significant impact due to existing mechanisms and proposed development standards that would put a check on future development projects.

The comment also states that the visual simulations do not show buildings built to the curb. Please see response to Comment 10-8, above.

Response 57-17

The comment states that the Draft EIR does not look at the greatest potential impacts because it does not reflect maximum buildout. The commentor requests that the EIR be revised to reflect maximum buildout. As explained above in response to Comment 9-7, the buildout projections in the Draft EIR are not synonymous with, nor are they intended to represent, full buildout of the proposed Plan. The full buildout of Plan would be the development of every parcel in the Plan Area with the maximum amount of development allowed under the Plan. The buildout projections in the Draft EIR, as described above, only assume that approximately 30 percent of the Plan Area would be redeveloped in the next 20 years. CEQA does not require that full buildout of a plan be evaluated by an EIR but rather requires that an EIR evaluate reasonably foreseeable impacts. As explained above in response to Comment 57-10, the buildout projections used in the Draft EIR represent what is considered to be a high level of development, and more development than is actually expected to occur over the next 20 years, yet these numbers were used to provide an environmentally conservative analysis. To analyze full buildout in the EIR would be speculative and would not provide a useful informational document for City decision-makers or the public. Since the buildout projection covers a relatively long time frame of 20 years, it is likely that there will be deviations from the development projections. However, deviations from the projected 2030 buildout are not in themselves a basis for finding inadequacy of the Plan or the Draft EIR, since these projections represent the City's best estimate of "reasonably foreseeable" development under the Plan.

Response 57-18

The comment states that traffic is already a major concern in Lafayette, and that increased traffic will affect the quality of life for Lafayette residents. The comment states the commentor's perspective on existing traffic conditions and the Plan's traffic impacts. The comment does not specifically address the methodologies or results of the traffic analysis in the Draft EIR. Therefore, no response required.

Response 57-19

The comment states that, although Lafayette has the lowest per capita number of officers in Contra Costa County, the Draft EIR has not provided mitigation and does not make provisions to add police officers. Potential impacts to police services from the Plan are discussed on pages 4.11-6 through 4.11-10 of the Draft EIR. Please see response to Comment 29-5, which addresses the same specific concern.

Response 57-20

The comment asks whether another Draft EIR will be prepared prior to the public review of the Final EIR. Revisions to the Draft EIR are contained in Chapter 3 of this Final EIR. The Draft EIR and Final EIR together comprise the complete EIR. The comment suggests that a second Draft EIR would be needed if the City desires to pursue the Plan. CEQA Guidelines Section 15088.5 describes the circumstances in which a Lead Agency is required to recirculate a Draft EIR. Under Section 15088.5, recirculation is necessary if: 1) a new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented; 2) a substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance; 3) a feasible project alternative or mitigation measure considerably different from other previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it; or 4) the Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. The

City has not determined that the Draft EIR meets any of these requirements, and therefore recirculation of the Draft EIR is not necessary.

Response 57-21

The comment summarizes statements made during the meeting that do not address the adequacy of the Draft EIR. No response is necessary.

Response 57-22

The commentor requests that the buildout projections for the No Project Alternative be revised to be based on the same methodology used for the proposed Plan. Please see response to Comment 7-7.

Response 57-23

The comment states that it is not possible to simply say that more multi-family housing will result in decreased revenue for schools, because in fact, an increase in students triggers funding from the State. The comment is noted. However, it does not address the adequacy of the Draft EIR, and no further response is necessary.

Response 57-24

The commentor requests that the buildout projections for the No Project Alternative be revised to be based on the same methodology used for the Plan. Please see response to Comment 7-7.

Response 57-25

The comment asks whether the same methodology used for the Plan's buildout projections were used for the No Project Alternative. Please see response to Comment 7-7.

Response 57-26

The commentor requests that the buildout projections for the No Project Alternative be revised to be based on the same methodology used for the Plan. Please see response to Comment 7-7.

Response 57-27

The comment states that Mitigation Measure AQ-2 would require that windows and doors be kept shut and that this is no way to live. This is the opinion of the commentor, and no revision to the EIR is necessary.

Response 57-28

The comment refers to sound walls along Mount Diablo Boulevard. Please see response to Comment 6-4.

Response 57-29

The comment asks whether a revised Draft EIR will be prepared prior to certification of the EIR. Revisions to the Draft EIR are included in Chapter 3 of this Final EIR. The Draft EIR and Final EIR will together comprise the complete EIR.

Response 57-30

The comment states that it would be interesting to see specific data on how school funding would be affected by an increase in population. This comment repeats the statement made previously in Comment 57-23. Please see response to Comment 57-23.

Response 57-31

The comment asks whether the Draft EIR will include a second draft incorporating comments received. Revisions to the Draft EIR are included in Chapter 3 of this Final EIR. The Draft EIR and Final EIR will together comprise the complete EIR.

Response 57-32

The comment explains an exchange between the Planning Commission and City staff during which it is explained why the City is preparing the Plan. No response is necessary.

Response 57-33

This comment inquires about walkways in relation to a proposed path from Mount Diablo Court to Pleasant Hill Road as part of a condominium development. The Lafayette Park Terrace project (at the end of Mount Diablo Court, outside the Plan Area) was approved with the following condition regarding sidewalks: Owner shall install a concrete sidewalk, curb and gutter on the south side of Mount Diablo Boulevard from the eastern entrance to the Lafayette Park Hotel to Pleasant Hill Road (approximately 1,400 linear feet) in accordance with City standards, or, at the sole discretion of the City Manager, the Owner may contribute an in-lieu fee of \$100,000.

The Plan's proposed pedestrian policies include the following relevant programs to encourage provision of walkways such as the one mentioned in the comment:

- ◆ Identify site planning opportunities prior to and during the development review process to minimize walking distances for pedestrians.
- ◆ Develop guidelines for pedestrian walkways addressing the various types of walking environments to include street-to-development entry routes, and improvements that should be made as part of adjacent private development.
- ◆ Develop connections between properties and streets, and between properties, to shorten pedestrian and bicycle travel by considering internal pathways through new development sites and connections to adjacent developments.

Response 57-34

The comment inquires about the California Department of Transportation (Caltrans) potentially addressing the proposed path described in Comment 54-33. The sidewalk approved for the Lafayette Park Terrace project is described above in response to Comment 57-33.

If a proposed path from Mount Diablo Court to Pleasant Hill Road would encroach on Caltrans right-of-way, a Caltrans encroachment permit would be required. Resolution of the detailed issues related to a specific walkway loca-

tion is not required in the Draft EIR. Please also see response to Comment 1-6.

Response 57-35

The comment asks how the evacuation of Moraga in the event of an emergency is addressed in the Draft EIR. Please see response to Comment 9-91.

Response 57-36

The comment requests a presentation to the Planning Commission on mitigation measures and corresponding standards of significance. The EIR consultant will provide such a presentation during a fall 2010 Planning Commission hearing.

Response 57-37

The comment states that the Draft EIR is an informational document and requests that the Draft EIR be revised to either reflect full buildout or explain why reductions were made in the buildout projection calculations. Please see response to Comment 9-7 for a detailed description of these calculations.

Response 57-38

The comment requests that the buildout projections for the Plan be revised to reflect 100 percent of development, or that reductions be more fully explained. Please see response to Comment 9-7.

Response 57-39

The comment summarizes statements made during the meeting that do not address the adequacy of the Draft EIR. No response is necessary.

CITY OF LAFAYETTE
DOWNTOWN LAFAYETTE SPECIFIC PLAN EIR
COMMENTS AND RESPONSES