CITY OF BRENTWOOD
COMMUNITY DEVELOPMENT DEPARTMENT

PALMILLA INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

March 2014

RANEY PLANNING & MANAGEMENT, INC.

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INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

March 2014

A. BACKGROUND

1. Project Title: Palmilla

2. Lead Agency Name and Address: City of Brentwood
Community Development Department
150 City Park Way
Brentwood, CA 94513

3. Contact Person and Phone Number: Jeff Zilm
Senior Planner
(925) 516-5136

4. Project Location: Both sides of Central Blvd., near Walnut Blvd. and Griffith Lane
Brentwood, CA

5. Project Sponsor's Name and Address: The Palmilla Project Owner, LLC
675 Hartz Avenue, Suite 202
Danville, CA 94526
(925) 362-3749

6. General Plan Designation: Special Planning Area "C"

7. Zoning: Planned Development No. 44

8. Project Description Summary:

The project site consists of a large portion of the area encompassed by the formerly approved Vesting Tentative Map (VTM) 8729, originally known as the "Marseilles Project." The City of Brentwood certified an EIR and approved VTM 8729 for the Marseilles Project in 2005. Whereas, the approved Marseilles VTM included a total of 581 residential units on approximately 77 acres, comprised of 108 multi-family units and 473 single family units, currently, a total of 408 single family residential units are now proposed for the same 77-acre site. William Lyon Homes has received approval of design review entitlements to construct homes on a total of 112 lots within VTM 8729. Therefore, these lots are not required to be part of this CEQA analysis; rather the 296 reconfigured lots shown on the new VTM (9332) for the Palmilla Project are the subject of this IS/MND.

The Palmilla VTM reconfigures the originally approved Marseilles layout for 60.6 acres of the project site, resulting in a total of 296 single-family lots, 3.79 acres of park land dedication, and internal streets and necessary water, sewer, and storm drainage infrastructure.

Central Boulevard will provide primary roadway access to the project site via three new project roadways: Palmilla Drive, Cabada Drive, and Mandevilla Drive.

B. SOURCES

The following documents are referenced information sources utilized by this analysis:

1. Allied Waste. *Keller Canyon Landfill*. Available at: http://alliedwasteservicesofcontracostacounty.com/disposal_sites_kellercanyon.cfm. Accessed February 2014.
2. City of Brentwood. *2010 Urban Water Management Plan*. May 2011.
3. City of Brentwood. *City Council*. September 23, 2008. Available at: http://www.ci.brentwood.ca.us/citycouncil/pastagenda/packet_2008/ccap20080923/ccap20080923_05.cfm. Accessed January 2014.
4. City of Brentwood. *City of Brentwood General Plan*. November, 2001.
5. City of Brentwood. *City of Brentwood General Plan EIR*. November, 2001.
6. City of Brentwood. Personal communication with Tim Nielsen, Assistant Planner, and Jagtar Dhaliwal, Development Manager. July 30, 2013.
7. Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. May 2011.
8. Brentwood Police Department. Email communication with Doug Silva, Lieutenant. November 14, 2013.
9. Brentwood Police Department. Email communication with Doug Silva, Lieutenant. December 4, 2013.
10. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
11. Department of Water Resources. *California's Groundwater Bulletin Update 2003*. Revised January, 20, 2006.
12. ENVIRON International Corporation and the California Air Districts. *California Emissions Estimator Model User's Guide Version 2013.2*. July 2013.
13. Federal Emergency Management Agency. *Flood Insurance Rate Map, Panel ID 06013C0362F and 06013C0354F*. June 16, 2009.
14. Fehr & Peers. *Transportation Impact Assessment, Palmilla Residential*. November 2013.
15. Jack Schreder & Associates. *School Facility Needs Analysis for Brentwood Union School District*. July 23, 2013.
16. J.C. Brennan & Associates, Inc. *Environmental Noise Assessment, Palmilla Residential*. February 5, 2014.
17. Liberty Union High School District. Email communication with Debra Fogarty, Chief Business Officer. November 12, 2013.
18. Olberding Environmental, Inc. *East Contra Costa County Habitat Conservation Plan, Planning Survey Report for Palmilla*. November 21, 2013.
19. Olberding Environmental. Personal communication with Kim Erickson. February 7, 2014.
20. Papineau, R.E.A. *Phase I Environmental Site Assessment of Approximately 74 Acres at Central Boulevard and Griffith Lane*. March 21, 2002, updated June 17, 2003.
21. TERRASEARCH, Inc. *Geotechnical Investigation on Proposed Residential Subdivision, Central Boulevard, Brentwood, California, for Pinn Brothers Construction Company*. September 27, 2002.

22. U.S. Department of Agriculture, Natural Resources Conservation Service, California Department of Conservation, Farmland Mapping and Monitoring Program. *Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Contra Costa County*. September 1977.
23. U.S. Department of Agriculture, Natural Resources Conservation Service. *Soil Survey of Contra Costa County, California*. September 1977.

C. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

✖ **Aesthetics**	✖ **Agriculture and Forest Resources**	✖ **Air Quality**
✖ **Biological Resources**	✖ **Cultural Resources**	✖ **Geology and Soils**
☐ **Greenhouse Gas Emissions**	✖ **Hazards and Hazardous Materials**	✖ **Hydrology and Water Quality**
☐ **Land Use and Planning**	☐ **Mineral Resources**	✖ **Noise**
☐ **Population and Housing**	✖ **Public Services**	☐ **Recreation**
✖ **Transportation & Circulation**	☐ **Utilities and Service Systems**	☐ **Mandatory Findings of Significance**

D. DETERMINATION

On the basis of this initial study:

☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

✖ I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR

pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Jeff Zilm	City of Brentwood
Printed Name	For

E. BACKGROUND AND INTRODUCTION

This Initial Study identifies and analyzes the potential environmental impacts of the proposed project. The information and analysis presented in this document are organized in accordance with the order of the CEQA checklist in Appendix G of the CEQA Guidelines. If the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures that should be applied to the project are prescribed.

The mitigation measures prescribed for environmental effects described in this Initial Study will be implemented in conjunction with the project, as required by CEQA. The mitigation measures will be incorporated into the project through project conditions of approval. The City will adopt findings and a Mitigation Monitoring/Reporting Program for the project in conjunction with its approval of the project.

In 2001, the City of Brentwood completed a General Plan Update, which updated the Land Use, Growth Management, and Circulation Elements of the 1993 General Plan. An Environmental Impact Report (EIR) was prepared for the General Plan Update, which addressed the potential impacts of the proposed updates. The General Plan Update EIR was a program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 *et seq*.). The Brentwood General Plan Update EIR analyzed full implementation of the Brentwood General Plan Update and identified measures to mitigate the significant adverse project and cumulative impacts associated with the General Plan. Because the General Plan Update only addresses three elements of the General Plan, the remaining elements are addressed in the 1993 General Plan. The 1993 General Plan adoption also included certification of a Program EIR addressing full implementation of the Plan. The City is in the process of completing a comprehensive update of its General Plan. The anticipated completion date is late summer 2014.

In addition to the General Plan Update EIR analysis, the Palmilla project site was reviewed in the 2004 project-level EIR prepared for the larger "Marseilles" project site. The Palmilla project site makes up a large portion of the area encompassed by the formerly approved VTM 8729, originally known as the "Marseilles Project." The City of Brentwood certified an EIR and approved a VTM (8729) for the Marseilles Project in 2005. The approved Marseilles Project included a total of 581 residential units, comprised of 108 multi-family units and 473 single family units. The project also included 9.85 acres of open space, a 0.93-acre linear park, and 4.14 acres of park.

The Palmilla project includes a General Plan Amendment to modify the project site's General Plan designation of Special Planning Area "C" (SPA C) to change roughly 20 acres from High Density Residential to Medium Density Residential. As a result, the environmental analysis contained in this IS/MND cannot be tiered from the Marseilles EIR or the General Plan Program EIR in accordance with CEQA Guidelines Section 15152; rather, the analysis herein will be primarily based upon project-specific technical studies, and to the extent feasible, information contained in the Marseilles EIR. Mitigation measures from the Marseilles EIR have been included in this IS/MND in their original form, or, if necessary, appropriately modified. Please note that the project-specific technical studies are available for review at Brentwood City Hall, 150 City Park Way, Brentwood, CA 94513.

F. PROJECT DESCRIPTION

The proposed project is located just northwest of downtown Brentwood, Contra Costa County (see

Figure 1, Regional Location Map). The City has historically been surrounded by agricultural land uses consisting primarily of row crops, orchards, and grazing lands. The City's planning area is located southeast of Antioch and south of the City of Oakley and Bethel Island. The planning area consists of approximately 65 square miles, and is characterized by the relatively flat terrain of the Central Valley, with gently sloping hills in the western and southwestern portion of the area approaching the foothills of the Diablo Range.

The Palmilla site is located on both sides of Central Boulevard, west/southwest of the Union Pacific Railroad tracks, and east of Marsh Creek (see Figure 2). The Central Boulevard crossing of the rail line is equipped with warning lights, gate arms and a median to prevent gate arm run-around. The Palmilla project site consists of partially developed, level terrain, which makes up a large portion of the area encompassed by the formerly approved VTM 8729, originally known as the "Marseilles Project." The City of Brentwood certified an EIR and approved a VTM (8729) for the Marseilles Project in 2005. Subsequent to development approvals, the site was mass-graded in 2006 and only a few residential structures and roadways were constructed in the approximate center of the site. These residential structures have been vandalized over time and all but seven have been demolished to make way for William Lyon Homes' El Sol and Cielo developments.

Whereas, the approved Marseilles VTM 8729 included a total of 581 residential units on approximately 77 acres, comprised of 108 multi-family units and 473 single family units, currently, a total of 408 single family residential units are now proposed for the same 77-acre site. William Lyon Homes has received approval of design review entitlements to construct homes on a total of 112 lots within VTM 8729. Therefore, these lots are not required to be part of this CEQA analysis; rather the 296 reconfigured lots shown on the new VTM (9332) for the Palmilla Project are the subject of this IS/MND (see Figure 3, Tentative Subdivision Map 9332). However, it is important to note that, for engineering purposes, the traffic and noise analyses prepared for the Palmilla Project are based upon development of the overall project site – 409 units[1] – in order to determine which traffic and noise mitigation measures, identified in the certified Marseilles EIR, are still required for the less intense development proposal.

The Palmilla VTM reconfigures the originally approved layout for 60.6 acres of the project site, resulting in a total of 296 single family lots, 3.79 acres of park land dedication, and internal streets and necessary water, sewer, and storm drainage infrastructure. Central Boulevard will provide primary roadway access to the project site via three new project roadways: Palmilla Drive, Cabada Drive, and Mandevilla Drive.

The entire project site is located in Special Planning Area (SPA) C. The Brentwood General Plan (p. 11. 1-25) states that the City has designated SPA C in order to allow enough flexibility to develop a mix of low, medium, and high residential densities to provide a wide variety of housing types and styles. Given the elimination of the previously approved high density residential area and the proposed reduction of the overall project density, the Palmilla Project requires a General Plan Amendment to change the Land Use Designation, for roughly 20 acres, from High Density Residential to Medium Density Residential, and a Rezone to amend the existing Planned Development No. 44 development standards.

[1] As discussed above, the current total is 408 single-family units due to the elimination of one lot after completion of the traffic and noise studies.

Figure 1
Regional Location Map

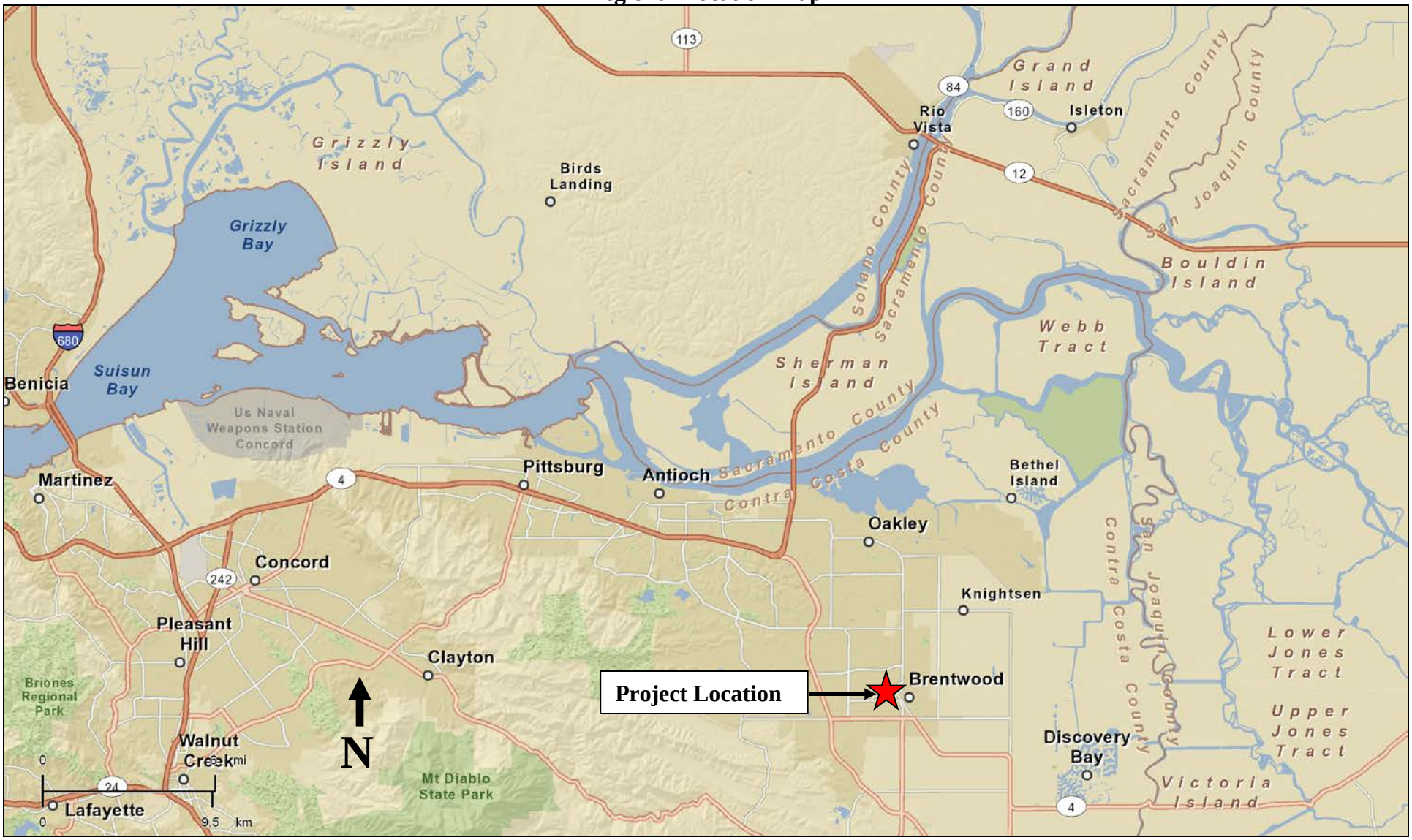
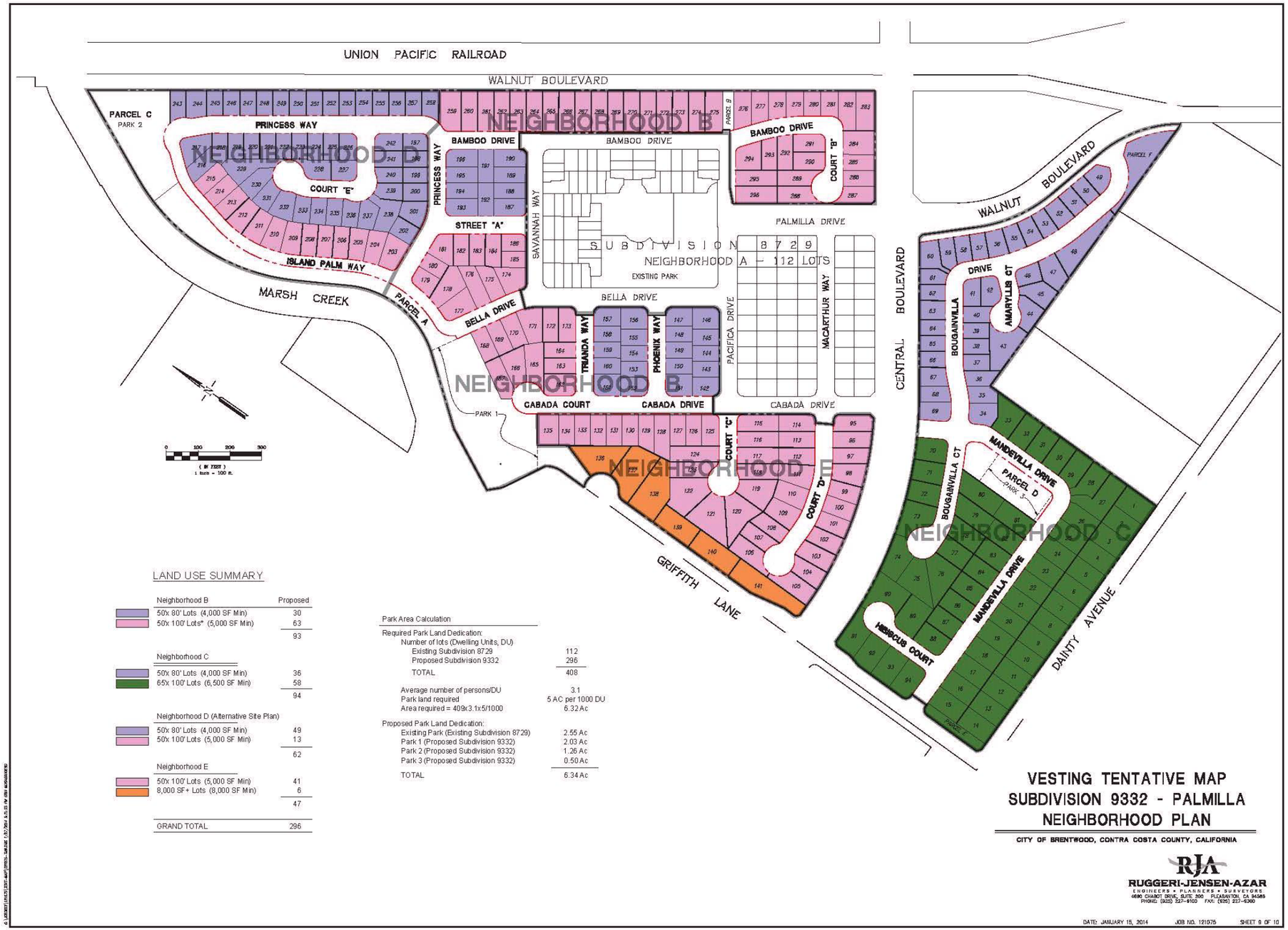


Figure 2
Project Location Map

Figure 3
Palmilla Vesting Tentative Map



LAND USE SUMMARY

	Neighborhood B	Proposed
	50'x 80' Lots (4,000 SF Min)	30
	50'x 100' Lots* (5,000 SF Min)	63
		93
	Neighborhood C	
	50'x 80' Lots (4,000 SF Min)	36
	65'x 100' Lots (6,500 SF Min)	58
		94
	Neighborhood D (Alternative Site Plan)	
	50'x 80' Lots (4,000 SF Min)	49
	50'x 100' Lots (5,000 SF Min)	13
		62
	Neighborhood E	
	50'x 100' Lots (5,000 SF Min)	41
	8,000 SF+ Lots (8,000 SF Min)	6
		47
	GRAND TOTAL	296

Park Area Calculation

Required Park Land Dedication:	
Number of lots (Dwelling Units, DU)	
Existing Subdivision 8729	112
Proposed Subdivision 9332	296
TOTAL	408
Average number of persons/DU	3.1
Park land required	5 AC per 1000 DU
Area required = 409x3.1x5/1000	6.32 Ac
Proposed Park Land Dedication:	
Existing Park (Existing Subdivision 8729)	2.55 Ac
Park 1 (Proposed Subdivision 9332)	2.03 Ac
Park 2 (Proposed Subdivision 9332)	1.26 Ac
Park 3 (Proposed Subdivision 9332)	0.50 Ac
TOTAL	6.34 Ac

VESTING TENTATIVE MAP
SUBDIVISION 9332 - PALMILLA
NEIGHBORHOOD PLAN

CITY OF BRENTWOOD, CONTRA COSTA COUNTY, CALIFORNIA

RJA
RUGGERI-JENSEN-AZAR
ENGINEERS • PLANNERS • SURVEYORS
4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300

DATE: JANUARY 15, 2014 JOB NO. 121075 SHEET 9 OF 10

Proposed bio-retention areas, as well as some of the park land area, will be situated along the east side of Marsh Creek to establish a buffer between the creek channel and proposed roadway and residential areas. This buffer will include the existing regional, paved trail along Marsh Creek. A pedestrian bridge over Marsh Creek was recently constructed at the northwestern corner of the project site.

Infrastructure

Storm Drainage

The preliminary approach to the storm water system includes the construction of 18-36-inch storm drain pipes within internal streets, which would collect and route on-site stormwater runoff to proposed bio-retention areas. Corresponding underground storage pipes could be included adjacent to the bioretention areas for storage and metering purposes. Ultimately, after being metered from underground storage pipes, most of the stormwater would be routed via pipes to the existing 84-inch storm drain pipe along the northern boundary of the project site, and discharged into Marsh Creek via a new outfall. The remainder of the stormwater would discharge to existing pipes in Griffith Lane or to an existing box culvert in Walnut Boulevard.

Sewer

The wastewater generated by the project would be collected by an internal sewer system, consisting of 8-inch sewer lines, which would connect to the existing 33-inch sewer trunk along Marsh Creek. The 33-inch trunk line continues north, under the existing railroad tracks, towards the City's wastewater treatment plant. Off-site sewer infrastructure improvements are not required as part of the project.

Water

The project would involve the construction of the necessary water infrastructure to serve the proposed neighborhoods. The intract system would consist of a network of looped 8-inch water mains that would connect to the existing mains in Central Boulevard, Walnut Boulevard, and Griffith Lane. Off-site water infrastructure improvements are not required as part of the project.

Entitlements

Implementation of the project requires approval of the following entitlements by the City of Brentwood:

- Approval of a General Plan Amendment to change the Land Use Designation, for roughly 20 acres, from High Density Residential to Medium Density Residential (SPA C);
- Approval of a Rezone to modify Planned Development-44 (PD-44) development standards; and
- Approval of a Vesting Tentative Subdivision Map for Subdivision 9332.

G. ENVIRONMENTAL CHECKLIST

The following Checklist contains the environmental checklist form presented in Appendix G of the CEQA Guidelines. The checklist form is used to describe the impacts of the proposed project. A discussion follows each environmental issue identified in the checklist. Included in each discussion are project-specific mitigation measures recommended as appropriate as part of the Proposed Project.

For this checklist, the following designations are used:

Potentially Significant Impact: An impact that could be significant, and for which no mitigation has been identified. If any potentially significant impacts are identified, an EIR must be prepared.

Less-Than-Significant With Mitigation Incorporated: An impact that requires mitigation to reduce the impact to a less-than-significant level.

Less-Than-Significant Impact: Any impact that would not be considered significant under CEQA relative to existing standards.

No Impact: The project would not have any impact.

I.	**AESTHETICS.** *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	✖	☐
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	✖	☐
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	✖	☐
d.	Create a new source of substantial light or glare which would adversely affect day or night-time views in the area?	☐	✖	☐	☐

Discussion

a,b. The proposed project is not within an area designated as a scenic vista. In addition, the site does not contain any scenic resources such as rock outcroppings or historical buildings. The City of Brentwood recognizes views of Mount Diablo as an important visual resource. The proposed project would be relatively low profile, with a maximum 2-story height and would not be expected to significantly alter the distant views of Mount Diablo for future residents in the project vicinity. For the existing residents in the project vicinity, the proposed project would not be expected to impact their views of Mount Diablo because existing residences are primarily located south, west, and north of the project site and Mount Diablo is located generally west of the project site. Therefore, the project would not have a substantial adverse effect to views of Mount Diablo for current residents of the area. Mount Diablo is a prominent resource that can be seen from almost anywhere in the City. Therefore, the proposed project would have a ***less-than-significant*** impact to views of Mount Diablo.

c. The 2001 Brentwood General Plan EIR (p. 3.3-2) identifies Walnut Boulevard as a Scenic Route. The upper terminus of Walnut Boulevard occurs at Central Boulevard, which is located in the southern portion of the project site. The visual setting at this point along Walnut Boulevard is primarily characterized by residential uses. As mentioned previously, the project site is surrounded on three sides with residential areas and the fourth area (north) consists of the UPRR tracks and commercial facilities. The proposed change in use of the project site from vacant, graded land to single family homes and internal streets is consistent with the intent of Special Planning Area (SPA) C as evidenced on page II. 1-25 of the Brentwood General Plan, and would be compatible with the pattern of development occurring or planned in the general area of the project site. In addition, the development of the single family homes requires Planning Commission Design Review, which would ensure compatibility of the development with the surrounding area. It should also be noted that the applicant is proposing to include, as part of the subdivision, various landscape features that would enhance the visual quality of the site. Therefore, the proposed project would have a ***less-than-significant*** impact with respect to substantially degrading the existing visual character or quality of the site and its surroundings.

d. The project site consists of vacant, graded land; therefore, very little light or glare is currently emitted from the project site. The change from an undeveloped property to a residential subdivision would generate new sources of light and glare. The residences located in the immediate vicinity of the site would be considered sensitive receptors, which could be adversely affected by additional sources of light and glare. Therefore, the increase in light and glare produced by the proposed project would be considered a ***potentially significant*** impact.

Mitigation Measure

Implementation of the following mitigation measure would reduce the potential impacts related to light and glare to a *less-than-significant* level.

I-1. *In conjunction with development of the proposed project, the developer shall shield all on-site lighting so that it is directed within the project site and does not illuminate adjacent properties. A detailed lighting plan shall be submitted for the review and approval by the Community Development Department, the Police Department, and the Engineering Department in conjunction with the project improvement plans. The lighting plan shall indicate the locations and design of the shielded light fixtures. [MM I-1 of the original Marseilles IS/MND]*

		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
II.	**AGRICULTURE AND FOREST RESOURCES.** *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:*				
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	☐	✖	☐	☐
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	✖
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	✖
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	✖
e.	Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	☐	✖	☐	☐

Discussion

a,e. The 60.6-acre project site is currently undeveloped and not being used for agricultural purposes. According to the Contra Costa County Soil Survey, the project site is made up of the following soils: Sorrento Silty Clay Loam (Sm) and Brentwood Clay Loam (Bb). The California Department of Conservation Farmland Mapping and Monitoring Program *Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Contra*

Costa County, lists Sm and Bb as being soils meeting the criteria for Prime Farmland.[2] Therefore, development of the proposed project would result in the conversion of Prime Farmland. However, the 2001 Brentwood General Plan identified the Palmilla project site as Special Planning Area (SPA) C, which envisioned residential uses for the project site. The General Plan designates areas along the eastern and southeastern portions of the Planning Area as Agricultural Conservation. The proposed project is not located within the conservation area.

The 2001 General Plan Update EIR evaluated the impacts of Prime Farmland conversion that would result from buildout of the General Plan and determined that impacts would remain significant and unavoidable even with implementation of General Plan goals and policies aimed at preserving agricultural lands. Given the fact that the 2001 General Plan designated the Palmilla project for development (SPA C), the conversion of Prime Farmland on the project site was already evaluated and considered in the General Plan Update EIR analysis. Furthermore, the project will be required to comply with Chapter 17.730, Agricultural Preservation Program, of the Brentwood Municipal Code, which requires the project applicant to preserve agricultural lands by either:

1. Granting an agricultural conservation easement to or for the benefit of the City and/or a qualified land trust approved by the City on agricultural land deemed acceptable by the City. The easement shall encumber the exact acreage of the proposed entitlement, including any land used for park and recreation purposes and may encumber land acquired by the City and/or qualified land trust in fee; or

2. Paying an in-lieu fee established by City council resolution. The fee may be adjusted annually but may not be increased by more than ten percent during any twelve-month period.

Should the project applicant not comply with the City's agricultural preservation requirements, the project's conversion of Prime Farmland would result in a ***potentially significant*** *impact*.

Mitigation Measure

Implementation of the following mitigation measure would mitigate potential impacts related to the loss of agricultural resources to a *less-than-significant* level.

II-1. *Prior to recordation of any final map or issuance of any grading permit, the developer shall comply with Chapter 17.730, Agricultural Preservation Program, of the Brentwood Municipal Code in order to mitigate the project's conversion of Prime Farmland by granting an agricultural conservation easement or paying the current agricultural conservation City fee in effect at that time to provide funds to purchase conservation easements to mitigate the*

[2] U.S. Department of Agriculture, Natural Resources Conservation Service, California Department of Conservation, Farmland Mapping and Monitoring Program. *Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, Contra Costa County*. September 1977.

loss of farmland. [MM 3.2-5 of the Marseilles EIR, as appropriately modified in this IS/MND]

b. The project site is not under Williamson Act contract, nor is the site zoned for agricultural use. The current zoning designation for the project site is Planned Development-44. Therefore, the project would have ***no impact*** with respect to conflicting with agricultural zoning or Williamson Act contracts.

c,d. The project site is not considered forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), and is not zoned Timberland Production (as defined by Government Code section 51104[g]). Therefore, the proposed project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

III.	**AIR QUALITY.** *Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	✖	☐
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	✖	☐	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	✖	☐	☐
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	✖	☐
e.	Create objectionable odors affecting a substantial number of people?	☐	☐	✖	☐

Discussion

a. The City of Brentwood is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area, and is located in the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB is currently designated as a nonattainment area for State and federal ozone, State and federal particulate matter 2.5 microns in diameter ($PM_{2.5}$), and State particulate matter 10 microns in diameter (PM_{10}) standards. The BAAQMD, in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), prepared the *2005 Ozone Strategy*, which is a roadmap depicting how the Bay Area will achieve compliance with the State one-hour air quality standard for ozone as expeditiously as practicable and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. Although the California Clean Air Act does not require the region to submit a plan for achieving the State PM_{10} standard, the *2005 Ozone Strategy* is expected to also reduce PM_{10} emissions. In addition, to fulfill federal air quality planning requirements, the BAAQMD adopted a $PM_{2.5}$ emissions inventory for year 2010, which was submitted to the U.S. Environmental Protection Agency (USEPA) on January 14, 2013 for inclusion in the State Implementation Plan (SIP).

The current plan in place to achieve progress toward attainment of the federal ozone standards is the *Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard*. The USEPA recently revoked the 1-hour federal ozone standard; however, the region is designated nonattainment for the new 8-hour standard that replaced the older one-hour standard. Until the region either adopts an approved attainment plan or

attains the standard and adopts a maintenance plan, the *Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard* remains the currently applicable federally approved plan.

The aforementioned applicable air quality plans contain mobile source controls, stationary source controls, and transportation control measures (TCMs) to be implemented in the region to attain the State and federal ozone standards within the SFBAAB. The plans are based on population and employment projections provided by local governments, usually developed as part of the General Plan update process. The proposed project would be considered to conflict with, or obstruct implementation of, an applicable air quality plan if the project would be inconsistent with the Ozone Attainment Plan's growth assumptions, in terms of population, employment, or regional growth in Vehicle Miles Traveled (VMT), which are based on ABAG projections that are, in turn, based on the City's General Plan. The proposed project includes a General Plan Amendment to modify the land uses on the site from High Density Residential to Medium Density Residential. As such, the project would not be considered exactly consistent with the growth assumptions of the applicable air quality plans. However, the modification from multi-family residential uses to single family residential uses on the site would result in a reduction in the anticipated population. In addition, according to the traffic impact analysis prepared for the proposed project, the proposed land use modifications would reduce the overall trips associated with the site from what is currently anticipated for the site based on the currently approved land uses. Subsequently, the project would result in fewer mobile source emissions than currently anticipated for the site. Because the proposed project would result in a slight reduction of the anticipated emissions associated with the site, the project would not conflict with the growth assumptions of the applicable air quality plans.

In addition, as presented in the sections below, the project, with incorporation of mitigation measures, would not exceed the applicable thresholds of significance for any pollutant and would not result in emissions that substantially contribute to the nonattainment designations of PM and ozone for the area. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans, and a ***less-than-significant*** impact would result.

b,c. According to the California Environmental Quality Act (CEQA) Guidelines, an air quality impact may be considered significant if the proposed project's implementation would result in, or potentially result in, conditions, which violate any existing local, State or federal air quality regulations. In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants designated as nonattainment in the area, the BAAQMD has established significance thresholds associated with development projects for emissions of reactive organic gases (ROG), nitrogen oxide (NO_x), PM_{10}, and $PM_{2.5}$. The BAAQMD's significance thresholds, expressed in pounds per day (lbs/day) for project-level and tons per year (tons/yr) for cumulative, listed in Table 1, are recommended for use in the evaluation of air quality impacts associated with proposed development projects.

Table 1
BAAQMD Thresholds of Significance

Pollutant	Construction (lbs/day)	Operational (lbs/day)	Cumulative (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82	82	15
$PM_{2.5}$	54	54	10

Source: BAAQMD, CEQA Guidelines, May 2011.

In addition, the BAAQMD identifies screening criteria for development projects, which provide a conservative indication of whether a development could result in potentially significant air quality impacts. If all of the screening criteria are met by a project, a detailed air quality assessment of that project's air pollutant emissions would not be required. The screening criteria for a single-family residential development are if the development is less than or equal to the following screening level sizes:

- 325 dwelling units for operational criteria pollutants;
- 56 dwelling units for operational greenhouse gas (GHG); or
- 114 dwelling units for construction criteria pollutants.

Accordingly, if a single-family development is less than or equal to the screening size for operational or construction criteria pollutants, or for operational GHG, the development would not be expected to result in potentially significant air quality impacts, and a detailed air quality assessment would not be required.

It should be noted that the BAAQMD was challenged in Superior Court, on the basis that the BAAQMD failed to comply with CEQA when it adopted its CEQA guidelines, including thresholds of significance. The BAAQMD was ordered to set aside the thresholds and conduct CEQA review of the proposed thresholds. On August 13, 2013, the First District Court of Appeal reversed the trial court's decision striking down BAAQMD's CEQA thresholds of significance for GHG emissions. The Court of Appeal's held that CEQA does not require BAAQMD to prepare an EIR before adopting thresholds of significance to assist in the determination of whether air emissions of proposed projects might be deemed "significant." The Court of Appeal's decision provides the means by which BAAQMD may ultimately reinstate the GHG emissions thresholds, though the court's decision does not become immediately effective. Ultimately, the thresholds of significance used to evaluate proposed developments are determined by the CEQA lead agency, which would be the City of Brentwood for the proposed project. Per CEQA Guidelines Section 15064.7, the City has elected to use the BAAQMD's thresholds and methodology for this project, as they are based on substantial evidence and remain the most up-to-date, scientifically-based method available to evaluate air quality impacts. Thus, the BAAQMD's thresholds of significance presented in Table 1, and the screening criteria, are utilized for this analysis.

Implementation of the proposed project would contribute local emissions in the area during both the construction and operation of the proposed project. As the proposed project involves

the development of 296 dwelling units, the project does not exceed the screening criteria for operational criteria pollutants resulting from a single-family residential development. As such, the proposed project would not be expected to result in potentially significant operational air quality impacts. However, the project does meet the construction criteria pollutant or GHG screening criteria, and an air quality assessment would be required. The proposed project's operational emissions have also been quantified for information purposes only.

The proposed project's emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2013.2.2.[3] Results of the CalEEMod modeling are expressed in lbs/day for construction and operational emissions, and in tons/yr for cumulative emissions, which allows for comparison between the model results and the BAAQMD significance thresholds. All modeling results are available for review at Brentwood City Hall.

Construction Emissions

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. As construction of the proposed project would generate air pollutant emissions intermittently within the site, and in the vicinity of the site, until all construction has been completed, construction is a potential concern because the proposed project is in a nonattainment area for ozone and PM.

Utilizing CalEEMod, the proposed project's construction-related criteria air pollutant emissions were estimated and are presented in Table 2 below.

Table 2
Maximum Unmitigated Project Construction Emissions

Pollutant	Project Emissions (lbs/day)	BAAQMD Significance Threshold (lbs/day)
ROG	12.99	54.0
NO_X	80.84	54.0
PM_{10}	21.38	82.0
$PM_{2.5}$	12.86	54.0

Source: CalEEMod, December 2013.

[3] CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project- or site-specific data was available, such data was input into the model (e.g., construction phases and timing).

As shown in the table, the proposed project's construction-related emissions would be below the applicable thresholds of significance, with the exception of NO_X emissions. It should be noted that the project is required to comply with all BAAQMD rules and regulations for construction, including implementation of the BAAQMD's recommended Basic Construction Mitigation Measures. The Basic Construction Mitigation Measures include, but are not limited to, watering exposed surfaces, covering all haul truck loads, removing all visible mud or dirt track-out, limiting vehicle speeds on unpaved roads, and minimizing idling time. Because the proposed project would exceed the applicable threshold of significance for construction-related NO_X emissions, the project could violate construction-related air quality standards or contribute to the area's nonattainment status of ozone, and impacts associated with construction-related NO_X emissions would be considered potentially significant.

Operational Emissions

Operational emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ would be generated by the proposed project from both mobile and stationary sources. Day-to-day activities such as future residents' vehicle trips to and from the project site would make up the majority of the mobile emissions. Emissions would occur from area sources such as natural gas combustion from heating mechanisms, landscape maintenance equipment exhaust, and consumer products.

Utilizing the CalEEMod, the proposed project's operational criteria air pollutant emissions were estimated and are presented in Table 3 below. As shown in the table, the proposed project's operational emissions of ROG, PM_{10}, and $PM_{2.5}$ would exceed the applicable thresholds of significance. Therefore, the proposed project could violate operational air quality standards or contribute to the area's nonattainment status of ozone and PM, and impacts associated with operational emissions would be considered potentially significant.

Table 3
Unmitigated Project Operational Emissions

Pollutant	Project Emissions (lbs/day)	BAAQMD Significance Threshold (lbs/day)
ROG	610.84	54.0
NO_X	25.26	54.0
PM_{10}	109.33	82.0
$PM_{2.5}$	101.94	54.0

Source: CalEEMod, December 2013.

Cumulative Emissions

The long-term emissions associated with operation of the proposed project in conjunction with other existing or planned development in the area would incrementally contribute to the region's air quality. In order to determine the proposed project's cumulative contribution to regional air quality, the City, as lead agency, has chosen to utilize the BAAQMD's cumulative thresholds as presented in Table 1. The proposed project's contribution to

cumulative emissions of criteria air pollutants were calculated using CalEEMod and are presented in Table 4 below. As shown in the table, the proposed project's unmitigated cumulative emissions would be below the applicable cumulative thresholds of significance. Therefore, the proposed project's incremental contribution to cumulative air quality impacts would be considered less than significant.

Table 4
Unmitigated Project Cumulative Emissions

Pollutant	Project Emissions (tons/yr)	BAAQMD Significance Threshold (tons/yr)
ROG	5.74	10
NO_X	3.38	10
PM_{10}	2.27	15
$PM_{2.5}$	0.98	10

Source: CalEEMod, February 2014.

Conclusion

As presented and discussed above, the proposed project would result in construction-related NO_X, and operational ROG, PM_{10}, and $PM_{2.5}$ emissions in excess of the applicable thresholds of significance. Accordingly, the project could violate air quality standards and contribute to the region's nonattainment status of ozone and PM. Therefore, a ***potentially significant*** impact would occur.

Mitigation Measures

Implementation of Mitigation Measure III-1 below would reduce the project's construction-related emissions as shown in Table 5. As shown in the table, with implementation of Mitigation Measure III-1, the project's construction-related emissions of NO_X would be reduced to below the applicable threshold of significance.

Table 5
Maximum Mitigated Project Construction Emissions

Pollutant	Project Emissions (lbs/day)	BAAQMD Significance Threshold (lbs/day)
ROG	11.90	54.0
NO_X	51.07	54.0
PM_{10}	19.20	82.0
$PM_{2.5}$	10.94	54.0

Source: CalEEMod, December 2013.

Implementation of Mitigation Measure III-2 below would reduce the project's operational emissions as presented in Table 6. As shown in the table, with implementation of Mitigation Measure III-4, the proposed project's emissions would be reduced to below the applicable thresholds of significance.

Table 6 Mitigated Project Operational Emissions		
Pollutant	**Project Emissions (lbs/day)**	**BAAQMD Significance Threshold (lbs/day)**
ROG	23.10	54.0
NO_X	17.59	54.0
PM_{10}	11.10	82.0
$PM_{2.5}$	3.71	54.0
Source: CalEEMod, December 2013.		

In addition, the proposed project is required to comply with the mitigation measures set forth in the Marseilles EIR, which are incorporated into this IS/MND as Mitigation Measures III-3 through III-5 below, which are consistent with Mitigation Measures 3.5-2(b), 3.5-4(a), and 3.5-4(b) of the Marseilles EIR. It should be noted that part IV of Mitigation Measure 3.5-2(b) of the Marseilles EIR would no longer represent a relevant mitigation due to the more recent Title 24 (now known as the California Green Building Standards Code or CALGreen) requirements of the California Building Code, which are much more stringent than the Title 24 requirements effective at the time the Marseilles EIR was prepared.

Therefore, implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

III-1. *Prior to grading permit issuance, the applicant shall develop a plan demonstrating that the heavy duty off-road equipment (more than 50 horsepower) to be used in the construction of the project (i.e., owned, leased, and subcontractor vehicles), including, but not limited to, cranes, excavators, graders, pavers, rubber-tired dozers, scrapers, and tractors, shall be consistent with Tier 2 federal standards for off-road diesel engines. Tier 2 standards could be met through advanced engine design and/or other options as such become available.*

III-2. *Wood-burning fireplaces, woodstoves, or similar wood-burning devices shall be prohibited in the single-family homes throughout the proposed project plan area. Homes may be fitted with the applicable regulation compliant natural gas burning appliances if desired. The prohibition shall be included on any project plans submitted prior to issuance of building permits, subject to review and approval by the City.*

III-3. *Minimize emissions from area sources.*

- *The Developer shall provide natural gas outlets in the back yard area of all single-family homes. Natural gas outlets shall be provided in common-use areas (appropriate for outdoor cooking) in apartment complexes. Electrical outlets (for electric grill starters) shall be provided in the presumed outdoor cooking area of all units.*

Compliance with this measure shall be included on the construction drawings for the review and approval of the City Building Official prior to the issuance of Building Permits.

- *The developer shall provide grounded outdoor outlets in areas convenient for use in gardening activities. Compliance with this measure shall be included on the construction drawings for the review and approval of the City Building Official prior to the issuance of Building Permits.*
- *The developer shall plant City-approved street trees sufficient to shade at least 50 percent of the pavement in neighborhood areas within 10 years. Compliance with this measure shall be included on the construction drawings for the review and approval of the City Building Official prior to the issuance of Building Permits. [MM 3.5-2(b) of the Marseilles EIR]*

III-4. *The BAAQMD recommends that the following measures be incorporated into construction contract specifications and enforced by the City. These measures include the following provisions:*

- *Water all active construction areas (e.g., trenching) at least twice daily and more often if visible dust occurs.*
- *Cover all hauling trucks hauling sand or soil, or, maintain at least two feet of freeboard.*
- *Apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.*
- *Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas and sweep streets daily (with water sweepers) if visible soil material is deposited onto the adjacent roads.*
- *Hydro seed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas that are inactive for 10 days or more).*
- *Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles.*
- *Limit traffic speeds on any unpaved roads to 15 mph.*
- *Install sandbags or other erosion control measures to prevent silt runoff to public roadways as appropriate.*
- *Replant vegetation in disturbed areas as quickly as possible.*
- *Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site.*
- *If necessary, install windbreaks, or use trees/vegetative windbreaks at the windward side(s) of construction areas to prevent visible dust clouds from affecting nearby sensitive uses (e.g., residences).*
- *Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph and visible dust emission cannot be prevented from leaving the construction site(s).*

- *Minimize areas subject to disturbance during excavation, grading, and other construction activity at any one time.*
- *If materials suspected to contain serpentine, asbestos, lead or other toxic air contaminants are discovered during construction, contact the BAAQMD's Enforcement Division prior to disturbance (or removal). [MM 3.5-4(a) of the Marseilles EIR]*

III-5. *The applicant shall implement the following measures during construction to reduce equipment exhaust emissions. These measures apply to all construction equipment (stationary or mobile) rated above 50 horsepower.*

- *Properly maintain construction equipment. This means that the contractor shall prohibit the use of equipment that produces more opaque (darker or more smoky) exhaust than other typical equipment of similar size. Opacity shall be observed under load to verify this measure.*
- *All diesel equipment on-site for more than one day shall use ultra-low sulfur diesel fuel (15 ppm sulfur) and 20 percent biodiesel. This would reduce opacity (particulate emissions) by about 50 percent, and reduce other toxic emissions by 20 percent or more. This mix of fuel would work in diesel equipment, regardless of age or manufacturer.*
- *At least 20 percent of the heavy-duty off-road construction equipment shall be powered by CARB certified off-road engines or equivalent.*
- *Idling construction equipment for five minutes or longer is prohibited. The contractor shall avoid staging equipment near or upwind from residences. [MM 3.5-4(b) of the Marseilles EIR]*

d. Emissions of carbon monoxide (CO) are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood. CO emissions are particularly related to traffic levels.

In addition to screening criteria for criteria pollutants and GHG, BAAQMD has established screening criteria for localized CO emissions, including the following:

- Consistency with applicable congestion management programs;
- Project traffic increase traffic volumes at intersections to more than 44,000 vehicles per hour; or
- Project traffic increase traffic volumes at intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, underpass, etc.).

As the City has elected to use the BAAQMD's thresholds and methodology for this project, the BAAQMD's screening criteria for localized CO emissions presented above are utilized for this analysis.

Because the proposed project involves a General Plan Amendment for a land use modification, the project would not be exactly consistent with any established congestion management program, as such programs are based on land use designations. However, as discussed above, the proposed modification from multi-family residential uses to single family residential uses on the site would result in a reduction in the overall trips associated with the site from what is currently anticipated based on the currently approved land uses. Subsequently, the project would result in fewer mobile source emissions than currently anticipated for the site. In addition, according to the traffic impact assessment prepared for the proposed project, none of the affected intersections currently involve traffic volumes, and would not increase in traffic volumes as a result of the proposed project, of 44,000 vehicles per hour (or 24,000 vehicles per hour). Therefore, according to the BAAQMD screening criteria above, the proposed project would not be expected to result in substantial increase in levels of CO at surrounding intersections, and the project would not generate or be subjected to localized concentrations of CO in excess of applicable standards.

Toxic Air Contaminants (TACs) are also a category of environmental concern. The California Air Resources Board's (CARB) *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommendations for siting new sensitive land uses near sources typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer.

Children, pregnant women, the elderly, and those with existing health problems are considered more sensitive to air pollution than others. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, day care centers, playgrounds, and medical facilities. The proposed project includes the development of single-family residences, which would be considered sensitive receptors. In addition, the proposed project site is surrounded by existing residential development on the north, south, and west.

The CARB, per its Handbook, considers that any project placing sensitive receptors within 500 feet of a major roadway or freeway may have the potential to expose those receptors to DPM. Similarly, the BAAQMD recommends placement of overlay zones at least 500 feet from all freeways and high volume roadways. The project site is not located within 500 feet of any freeway or high volume roadway, and would not be subjected to substantial concentrations of DPM associated with such.

It should be noted that the project site is located adjacent to existing Union Pacific Railroad tracks; however, CARB does not consider train tracks to be a significant source of TAC

emissions and is only concerned with rail yards due to the substantial amount of trains and idling. The project site is not located near an existing rail yard, thus, the project would not be affected by DPM emissions associated with a rail yard.

The project does not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. Emissions of DPM resulting from construction-related equipment and vehicles are temporary. Relatively few vehicle trips associated with the proposed use would be expected to be composed of diesel-fueled vehicles. Therefore, the project would not generate any substantial concentrations of TACs.

In conclusion, the proposed project would not expose sensitive receptors to substantial concentrations of any TACs. Therefore, impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be considered ***less than significant***.

e. According to the CARB's Handbook, some of the most common sources of odor complaints received by local air districts are sewage treatment plants, landfills, recycling facilities, waste transfer stations, petroleum refineries, biomass operations, autobody shops, coating operations, fiberglass manufacturing, foundries, rendering plants, and livestock operations. The proposed project site is located in a developed area and is surrounded by existing residential land uses to the north, south, and west. Commercial land uses are located to the east, opposite the Union Pacific Railroad tracks. Accordingly, the proposed project is not located in the vicinity of any substantial objectionable odor sources such as those mentioned above.

Residential land uses are not typically associated with the creation of substantial objectionable odors. Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, construction of the proposed project would be temporary and diesel emissions would be temporary and regulated. Accordingly, the project would not be expected to create or be subjected to objectionable odors, and a ***less-than-significant*** impact would result.

IV.	**BIOLOGICAL RESOURCES.** *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	✖	☐	☐
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	✖	☐	☐
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	✖	☐	☐
d.	Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	✖	☐
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	✖	☐	☐
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	✖	☐

Discussion

a,b. This section is based upon Planning Survey Report (PSR) prepared for the project site by Olberding Environmental, Inc. in order to comply with and receive Permit coverage under the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCC HCP/NCCP).[4]

On July 10, 2013, an Olberding Environmental biologist conducted a planning survey of the project site. The biologist assessed both the project site and habitats within 200 feet (Study

[4] Olberding Environmental, Inc. *East Contra Costa County Habitat Conservation Plan, Planning Survey Report for Palmilla*. November 21, 2013.

Area). The majority of the project site is highly disturbed ruderal land that was previously mass-graded for the Marseilles development.

Special-status Plants

Table 2b of the ECCC HCP/NCCP identifies "Covered and No-Take Plants, Typical Habitat Conditions, and Typical Blooming Periods," none of which are expected to occur on-site because the site does not contain any of the land cover types that may support special-status plant species. Rather, the site's land cover type is "ruderal." In addition, special-status plants are not expected to occur along Marsh Creek, where stormwater outfall improvements would occur as part of project construction, because the creek banks are actively managed by the Contra Costa County Flood Control and Water Conservation District as part of the flood control maintenance activities. A California Natural Diversity Database (CNDDB) search conducted on November 14, 2013, did not identify any special-status plant species occurrences within two miles of the project site within the last 10 years. Furthermore, special-status plant species were not observed at the project site.

Special-status Wildlife

According to Olberding Environmental, two special-status wildlife species have a moderate to high potential to occur at the project site: western burrowing owl and western pond turtle. The possibility also exists that Swainson's hawk use the site as foraging habitat.

Western Burrowing Owl (*Athene cunicularia hypugaea*)

The western burrowing owl is a California Department of Fish and Wildlife (CDFW) Species of Special Concern. Burrowing owl typically favors flat, open grassland or gentle slopes and sparse shrub-land ecosystems. Burrowing owls exhibit high site fidelity and usually nest in abandoned burrows of ground squirrels or pocket gophers.

The project site contains habitat considered suitable for the western burrowing owl (foraging and nesting habitats). Although burrowing owls were not observed during the July 10, 2013 site visit, they have been subsequently observed on-site by Olberding Environmental.[5] In addition, multiple occurrences have been documented by the CNDDB within 5 miles of the project site.

Western Pond Turtle (*Clemmys marmorata*)

The western pond turtle is a CDFW Species of Special Concern. Western pond turtles occur in a variety of aquatic habitats from sea level to elevations of 6,500 feet. They are found in rivers, streams, lakes, ponds, wetlands, reservoirs, and brackish estuarine waters. Western pond turtles use aquatic habitats primarily for foraging, thermoregulation, and avoidance of predators. This species is commonly found in Marsh Creek.

[5] Personal communication with Kim Erickson, Olberding Environmental, February 7, 2014.

Western pond turtles were not observed during the site visit; however, Marsh Creek is considered suitable habitat for this species.

Swainson's hawk

The Swainson's hawk is a State Threatened species. Based upon the adjacency of Marsh Creek and the presence of scattered trees along the creek, a low potential exists for Swainson's hawk to nest off-site. Swainson's hawk nesting habitat does not occur on-site. In addition, the Marseilles EIR determined that the project site constitutes potential foraging habitat for Swainson's hawk. Accordingly, Mitigation Measure (MM) 3.6-5(b) of the EIR required mitigation for loss of Swainson's hawk foraging habitat, to the extent necessary, as determined by the City with technical assistance from CDFW. As verified with Olberding Environmental, payment of the ECCC HCP/NCCP development fee, would satisfy MM 3.6-5(b) of the Marseilles EIR because the Swainson's hawk is a covered species.[6] Mitigation Measure IV-1 of this IS/MND requires the applicant to pay the ECCC HCP/NCCP development fee.

Other migratory birds and nesting raptors

Existing ornamental trees occur along the entry drive to the project site; and a few native trees are located along the existing Marsh Creek trail, which is immediately outside the project's western boundary. Little to no impacts are anticipated to occur to these trees as a result of project development. A remote potential exists, however, for the ornamental trees to be damaged during construction, which could result in adverse impacts to nesting migratory birds should they be nesting within the ornamental trees.

Migratory birds and their nests are protected under California Fish and Wildlife Code (Sections 3503, 3503.5, 3513), and the Migratory Bird Treaty Act. Due to the fact that most birds can fly out of harms-way, development of the project site would not be expected to harm adult birds. However, nesting birds are susceptible to take through disturbance that harms eggs or young.

Conclusion

Due to the disturbed nature of the project site, suitable habitat does not exist to support special-status plant species. While the site provides limited habitat value to special-status wildlife, burrowing owl have been observed on-site, and the site could support western pond turtle (upland habitat) and migratory birds and raptors, such as the Swainson's hawk. In accordance with the ECCC HCP/NCCP, wildlife species surveys are required to determine whether any special-status wildlife species are occupying the project site prior to initiating on-site ground disturbance. If the necessary preconstruction surveys are not carried out, the project could result in a ***potentially significant*** adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service. In addition, the proposed project could

[6] Personal communication with Kim Erickson, Olberding Environmental, February 7, 2014.

result in *potentially significant* impacts to federally-protected birds not covered under the ECCC HCP/NCCP (i.e., migratory birds protected under the Migratory Bird Treaty Act) unless surveys are conducted.

Mitigation Measures

The following mitigation measures would reduce the above-stated special-status wildlife impacts to a *less-than-significant* level.

ECCC HCP/NCCP Development Fee

The original project applicant, Pinn Brothers Partners, entered into a Memorandum of Agreement with the California Department of Fish and Game (now California Department of Fish and Wildlife) on June 7, 2006, for purposes of mitigating impacts to burrowing owl habitat. As part of this MOA, Pinn Brothers paid $348,270 to the California Wildlife Foundation for purposes acquiring and/or conserving species habitat within the HCP Inventory Area, Eastern Contra Costa County. This amount will be deducted from the ECCC HCP/NCCP development fee amount owed for the current project.

IV-1. *Prior to the issuance of grading or construction permits for the project site, the developer shall submit an HCP/NCCP application and associated fee worksheet to the City of Brentwood Community Development Department for review and approval. The developer shall pay the applicable East Contra Costa County HCP/NCCP per-acre fee in effect for Zone I in compliance with Section 16.168.070 of the Brentwood Municipal Code. The fee amount calculation shall account for the money already paid by Pinn Brothers in accordance with the July 7, 2006 Memorandum of Agreement with CDFW.*

Burrowing Owl

IV-2a. *Prior to any ground disturbance related to activities covered under the ECCC HCP/NCCP, a USFWS/CDFW-approved biologist shall conduct a preconstruction survey on the project site. The survey shall establish the presence or absence of western burrowing owl and/or habitat features, and evaluate use by owls in accordance with CDFW survey guidelines (California Department of Fish and Game, 1993).*

On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership need not be surveyed. The survey shall take place near the sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls shall be identified and mapped. The survey shall take place no more than 30 days prior to construction. During the breeding season (February 1-August 31), surveys shall document whether burrowing owls are nesting on or directly adjacent to disturbance areas. During the non-breeding season (September 1-January 31), surveys shall document whether burrowing owls are using habitat on or directly adjacent to any

disturbance area. Survey results will be valid only for the season during which the survey is conducted. The survey results shall be submitted to CDFW and the City of Brentwood Community Development Department.

If burrowing owls and/or burrows are identified in the survey area, Mitigation Measure IV-2b shall be implemented. If no burrowing owls and/or suitable burrows are discovered, then no further mitigation is necessary.

IV-2b. *If burrowing owls are found during the breeding season (February 1-August 31), the project proponent shall avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season, or while the nest is occupied by adults or young.*

Avoidance shall include establishment of a 160-foot non-disturbance buffer zone. Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation, or that the juveniles from the occupied burrows have fledged. During the non-breeding season (September 1-January 31), the project proponent shall avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a 160-foot non-disturbance buffer zone.

If it is not possible to avoid occupied burrows, passive relocation shall be implemented. Owls shall be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors shall be in place for 48 hours prior to excavation. The project area shall be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent re-occupation (California Department of Fish and Game, 2012). Plastic tubing or a similar structure shall be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow. [MM 3.6-2(a) and (b) of the Marseilles EIR, as appropriately modified in this IS/MND]

Migratory Birds and Nesting Raptors, including Swainson's hawk

The following mitigation measures satisfy the preconstruction survey requirements set forth in MMs 3.6-3, 3.6-4, and 3.6-5(a) of the Marseilles EIR.

IV-3a. *Prior to any ground disturbance related to covered activities during the nesting season (March 15-September 15), a qualified biologist shall conduct a preconstruction survey no more than 30 days prior to construction in order to establish whether occupied migratory bird and/or raptor nests are located within 1,000 feet of the project site. A written summary of the survey results shall be submitted to the City of Brentwood Community Development Department. If occupied nests occur on-site or within 1,000 feet of the project site, then Mitigation Measure IV-3b shall be implemented. If no occupied nests are found, further mitigation is not necessary.*

IV-3b. *During the nesting season (March 15-September 15), covered activities within 1,000 feet of occupied nests or nests under construction shall be prohibited to prevent nest abandonment. If site-specific conditions, or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be used, the City of Brentwood may coordinate with CDFW/USFWS to determine the appropriate buffer size. If young fledge prior to September 15, covered activities can proceed normally.*

Western Pond Turtle

IV-4. *Prior to initiation of construction activities, a qualified biologist shall conduct a preconstruction survey for the western pond turtle. If turtles are found, the qualified biologist shall capture and relocate the turtles to areas of Marsh Creek that will not be impacted by project activities.*

c. The project site does not contain riparian habitat or any jurisdictional Waters of the U.S. Marsh Creek is located immediately west of the project site and the project requires installation of a new stormwater outfall, which could result in adverse impacts to Marsh Creek, a feature under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and CDFW.

The applicant proposes to repair and replace an existing 56-inch-diameter storm water outfall on the south embankment of Marsh Creek with an 84-inch-diameter outfall. The project is located at Marsh Creek just south of the railroad tracks. The need for this project arises from the fact that the existing storm drain outfall is undersized and must therefore either be repaired, replaced, or another outfall must be constructed in the same area.

Repair and replacement of the outfall requires that the existing outfall be removed from the embankment and replaced with a new structure. A trench measuring 30 feet wide by 25 feet long (750 feet) would be excavated four feet below the water surface elevation to allow the installation of rock between the replaced culvert and existing culverts on the opposite embankment per Flood District standards. Rock riprap consisting of ¼- to ½-ton rock would be installed below the outfall and across the channel bed to prevent erosion of the embankments. This material would be positioned slightly below grade to allow sediment to cover the rock and form a natural channel bed on top of the rock. The outfall will be held in place by concreted rip-rap designed to meet Flood District requirements.

Permanent impacts of the outfall are estimated to be 0.012 acres (20 linear feet) resulting from the placement of approximately 40 cubic yards of rock riprap in the creek (27 feet wide by 20 feet long).

Temporary impacts of the outfall are estimated to be 0.004 acres (10 linear feet) resulting from the placement of 15 cubic yards of fill related to installation of the two cofferdams. One cofferdam will measure 10 feet wide by 5 feet long and the second cofferdam will measure

22 feet wide by 5 feet long. Construction is expected to begin in 2014 and will take approximately three months to complete.

Conclusion

The project site does not contain riparian habitat or any jurisdictional Waters of the U.S. that could be impacted by the project. However, impacts to Marsh Creek would occur as a result of the installation of a new stormwater outfall during project construction. This improvement would require permits from USACE and the California Regional Water Quality Control Board (CRWCQB). In addition, a 1602 Streambed Alteration Agreement would be needed from CDFW. Therefore, the project improvements (e.g., outfall replacement) would result in a ***potentially significant*** impact with respect to having a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Mitigation Measures

The following mitigation measures would reduce the above-stated impacts associated with the new storm water outfall into Marsh Creek to a *less-than-significant* level.

IV-5. *Prior to initiation of ground disturbance activities associated with the new stormwater outfall into Marsh Creek, a Streambed Alteration Agreement (SAA) shall be obtained from the California Department of Fish & Wildlife (CDFW), pursuant to Section 1600 of the California Fish and Game Code, for any activities affecting the bed, bank, or associated riparian vegetation along Marsh Creek. If required, the developer shall coordinate with CDFW in developing appropriate mitigation, and shall abide by the conditions of any executed permits. A copy of the executed SAA shall be submitted to the Brentwood Community Development Department. [MM 3.6-6(a) of the Marseilles EIR as appropriately modified in this IS/MND]*

IV-6. *The developer shall obtain an appropriate Section 404 permit from the U.S. Army Corps of Engineers prior to initiation of ground disturbance activities associated with construction of the new stormwater outfall into Marsh Creek. Section 401 water quality certification or waiver from the California Regional Water Quality Control Board will also be required. [MM 3.6-6(b) of the Marseilles EIR as appropriately modified in this IS/MND]*

IV-7. *Prior to the issuance of grading or construction permits for the project, the developer shall pay the Wetland mitigation fee determined for the project to the East Contra Costa County Habitat Conservancy for the new stormwater outfall into Marsh Creek. The Wetland mitigation fee amount applicable to the affected development project shall be the Wetland mitigation fee amount in effect at the time of grading or construction permit issuance.*

It should be noted here that the Traffic Section of this IS/MND requires the project to pay its fair share towards the eventual widening of the Central Boulevard Bridge over Marsh Creek,

an improvement project which would be expected to result in temporary impacts to Marsh Creek. The widening of the Central Boulevard Bridge is **not** required as part of this project for traffic mitigation purposes. Rather, the improvement is identified in the City's Circulation Element and Capital Improvement Program (CIP). As a result, it is anticipated that this improvement would be constructed by the City in the long-term. In the future, prior to widening of the bridge, the City would need to obtain permits from the applicable regulatory agencies. It is anticipated that the requirements set forth in the above mitigation measures would also be necessary for the bridge widening project.

d. While the proposed project would result in substantial development of the project site, the proposed project site is surrounded by development on all sides, with the exception of Marsh Creek to the west. With minor exception (i.e., stormwater outfall), the project would not impact Marsh Creek, which may currently serve as a limited migration corridor for wildlife. In addition, Mitigation Measures IV-5 through IV-8 would address the limited impacts to Marsh Creek as a result of the installation of the new stormwater outfall. As a result, impacts related to the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impeding the use of wildlife nursery sites are considered ***less-than-significant***.

e. The Tree Report previously prepared for the Marseilles Project identified 14 trees located offsite that may be impacted during construction because their canopies overhang onto the project site. In addition, an onsite valley oak tree, in poor condition, leans to the southwest over the existing Marsh Creek Regional Trail. The Preliminary Grading and Utility Plan for Subdivision 9332 indicates that the oak tree would be removed. Therefore, the proposed project has the potential to conflict with the City of Brentwood Tree Ordinance, and would result in a ***potentially significant*** impact.

Mitigation Measures

Implementation of the following mitigation measures would reduce the impact from the proposed project to a *less-than-significant* level.

IV-9(a). *The Tree Report prepared by HortScience, Inc. gives the following recommendations to ensure impacts to trees are less-than-significant. The recommendations shall be implemented subject to the review and approval by the Community Development Department.*

- *Design improvements to Griffith Lane to maintain any excavation and/or pavement activities a minimum of 5 feet from tree trunks; and*
- *Prior to grading activities, install temporary tree protection fencing a minimum of 5 feet from tree trunks. Fences are to remain until all grading and construction is completed. Placement of spoil or equipment is not allowed within the fenced area; and*
- *Any pruning required to create adequate vertical clearance shall be performed by a Certified Arborist of Tree Worker and adhere to the Tree Pruning Guidelines of the International Society of Arboriculture. [MM 3.6-7(a) of the Marseilles EIR]*

IV-9(b) *If the City determines it is not practicable to preserve any existing healthy trees, the applicant shall formulate a tree replacement plan to mitigate the*

loss of healthy mature trees in the project area. The tree replacement plan shall be submitted prior to the issuance of grading permits for the review and approval by the Community Development Department and the Parks and Recreation Department. In addition, the applicant shall obtain the necessary permit for the removal and/or destruction of trees that cannot be avoided during project construction for the review and approval by the Community Development Department. [MM 3.6-7(b) of the Marseilles EIR]

f. In July 2007 the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCC HCP/NCCP) was adopted by Contra Costa County, the City of Brentwood, other member cities, the USFWS and the CDFW. The HCP provides guidance for the mitigation of impacts to covered species. Mitigation of impacts is accomplished through payment into two separate funds – a Development Fee and a Wetland Fee. The Development Fee requires payment based on a cost per acre for all acres converted to non-habitat with the cost per acre based on the quality of the habitat converted. The Wetland Fee requires payment based on the amount and type of wetland or waters affected. These funds are used to acquire higher value habitats in preserved areas and to fund their restoration and management. Because the City of Brentwood is a signatory to the HCP, anticipated project impacts can be mitigated through the payment of Development and Wetland Impact fees to the HCP. The proposed project would comply with the ECCC HCP/NCCP requirements regarding special-status species, and the applicant would be required to pay the associated Wetland Fee and Development Fee to the HCP, as applicable, per Mitigation Measures IV-1 and IV-7 above. Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, resulting in a ***less-than-significant*** impact.

V.	**CULTURAL RESOURCES.** *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	✖	☐
b.	Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	☐	✖	☐	☐
c.	Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?	☐	✖	☐	☐
d.	Disturb any human remains, including those interred outside of formal cemeteries.	☐	✖	☐	☐

Discussion

a. The Palmilla project site is located within the greater Marseilles project site, which was mass-graded in 2006. Above-ground structures do not exist on the Palmilla project site. Therefore, development of the proposed project would have a ***less-than-significant*** impact on historical resources.

b-d. The 2001 Brentwood General Plan EIR does not indicate known sites of archaeological significance at the proposed project site. However, given the prehistory of the area, the project site could have potentially been occupied or traversed by the Bay Miwok tribe at any point during the time when the Miwok's were present in the area (approximately 1100 A.D. to 1770 A.D.). Based on previous data, it may be concluded that much of the Brentwood Planning Area has a low-to-moderate sensitivity for the presence of prehistoric sites. An archaeological inspection was previously conducted for the Marseilles project site by Holman & Associates. The report indicated that evidence of either prehistoric or historic archaeological deposits were not found anywhere inside the project site. Furthermore, the project site was mass-graded in 2006 and no archaeological resources were discovered on-site during grading operations. Notwithstanding the above, given the proximity of the project site to Marsh Creek, buried prehistoric archaeological deposits could occur in or immediately adjacent to the site. Because the potential exists that previously unknown resources could be discovered, a ***potentially significant*** impact could result. It should also be noted that, in conformance with SB 18, consultation letters have been sent out to several Native American tribes identified by the Native American Heritage Commission as having traditional lands or cultural places located within the Brentwood General Plan boundaries. To date, the City has not received any responses.

Mitigation Measures

Implementation of the following mitigation measures would reduce the construction-related impacts to a *less-than-significant* level.[7]

[7] Note: Cumulative Mitigation Measure 3.7-3 of the Marseilles EIR has not been included in this IS/MND because it has been deemed duplicative of MM 3.7-1(c) from the Marseilles EIR.

V-1. *During grading and construction, an archaeological monitor shall be retained to inspect any trenching or grading operations which may happen within 200 feet of Marsh Creek, if such work would continue below a depth of approximately four feet from the existing surface. [MM 3.7-1(a) of the Marseilles EIR]*

V-2. *In the event that any archaeological deposits are discovered during construction or grading, further grading or trenching within 50 feet of the discovery shall be halted until a plan has been submitted to the City Community Development Department for the evaluation of the resource as required under current CEQA guidelines. If evaluation concludes the archaeological deposit is eligible for inclusion on the California Register of Historic Resources, a plan for the mitigation of impacts to the resource shall also be submitted to the Community Development Department for approval. [MM 3.7-1(b) of the Marseilles EIR]*

V-3. *During construction, if any earth-moving activities uncover artifacts, exotic rock, or unusual amounts of bone or shell, work shall be halted in the immediate area of the find and shall not be resumed until after a qualified archaeologist has inspected and evaluated the deposit and determined the appropriate means of curation. The appropriate mitigation measures may include as little as recording the resource with the California Archaeological Inventory database or as much as excavation, recordation, and preservation of the sites that have outstanding cultural or historic significance. [MM 3.7-1(c) of the Marseilles EIR]*

V-4. *During construction, if bone is uncovered that may be human, the California Native American Heritage Commission, located in Sacramento, and the Contra Costa County Coroner shall be notified. Should human remains be found, the Coroner's office shall be immediately contacted and all work halted until final disposition by the Coroner. Should the remains be determined to be of Native American descent, the Native American Heritage Commission shall be consulted to determine the appropriate disposition of such remains. [MM 3.7-1(d) of the Marseilles EIR]*

VI.	**GEOLOGY AND SOILS.** *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist - Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault?	☐	✖	☐	☐
	ii. Strong seismic ground shaking?	☐	✖	☐	☐
	iii. Seismic-related ground failure, including liquefaction?	☐	☐	✖	☐
	iv. Landslides?	☐	☐	✖	☐
b.	Result in substantial soil erosion or the loss of topsoil?		✖	☐	☐
c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	✖	☐
d.	Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code?	☐	✖	☐	☐
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	✖

Discussion

a.i-ii. According to the 2001 Brentwood General Plan Update EIR, the project site is not within an Alquist-Priolo Special Studies Zone; however, the EIR indicates that the Brentwood area is located in a seismically active zone. Five active faults are located within an approximate 50-mile radius of the project site. The nearest State of California zoned, active faults are the Greenville and Concord faults. Development of the proposed project in this seismically active zone could expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault and/or strong seismic ground shaking. Therefore, a ***potentially significant*** impact could result.

Mitigation Measure

Implementation of the following mitigation measure would ensure the impacts are *less-than-significant*.

VI-1. *All grading and foundation plans for the development designed by the project Civil and Structural Engineer must be reviewed and approved by the City Engineer, Chief Building Official, and a qualified Geotechnical Engineer prior to issuance of grading and building permits to ensure that all geotechnical recommendations specified in the geotechnical report are properly incorporated and utilized in the project design. [MM VI-2 of the original Marseilles IS/MND]*

a.iii, c. The Brentwood 2001 General Plan states that during a seismic event rapid loading of saturated, fine-grained soil may create excess pore pressures, which may not dissipate rapidly. The excess pressure may result in a loss of shear strength, which is referred to as liquefaction. The potential for liquefaction is greater when the groundwater is shallow (less than 50 feet). The Geotechnical Investigation conducted specifically for the Marseilles Project by TERRASEARCH Inc. (September 2002) found that liquefaction is not a significant seismic-related hazard for the project site due to the nature of the subsurface materials. The Report states that, based upon published documentation, the materials underlying the project site consist of Holocene coarse-grained alluvium, which consists of unconsolidated, moderately sorted, permeable sand and silt with coarse sand and gravel. As a result, implementation of the project would not expose people or structures to potential substantial adverse effects related to liquefaction, which would result in a ***less-than-significant*** impact. Furthermore, the City Building Division will review the building plans to ensure that all structures are designed in accordance with the California Building Code, which includes requisite seismic provisions.

a.iv. The Palmilla project site is relatively flat and would not be susceptible to landslides. As a result, the project would have a ***less-than-significant*** impact with respect to exposing people or structures to potential substantial adverse effects related to landslides.

b. The project site primarily consists of undeveloped land. Approval and implementation of the Palmilla VTM, including the construction of a new stormwater outfall at Marsh Creek, would result in topsoil disturbance over approximately 34 acres for the development of 296 residential units and associated internal roadways. Disturbance of said topsoils could lead to erosion if the loose soils are subjected to wind and water forces. Without implementation of appropriate Best Management Practices (BMPs) related to prevention of soil erosion during construction, development of the project would result in a ***potentially significant*** impact with respect to soil erosion. See also Questions 'a,f' in Section IV, Hydrology and Water Quality, of this IS/MND.

Mitigation Measures

Implementation of the following mitigation measures would ensure the impact is *less-than-significant*.

VI-2. *Prior to grading permit issuance, the applicant shall submit a final grading plan to the City Engineer for review and approval. If the grading plan differs significantly from the proposed grading illustrated on the approved project plans, plans that are consistent with the new revised grading plan shall be provided for review and approval by the City Engineer.*

VI-3. *Any applicant for a grading permit shall submit an erosion control plan to the City Engineer for review and approval. This plan shall identify protective measures to be taken during construction, supplemental measures to be taken during the rainy season, the sequenced timing of grading and construction, and subsequent revegetation and landscaping work to ensure water quality in creeks and tributaries in the General Plan Area is not degraded from its present level. All protective measures shall be shown on the grading plans and specify the entity responsible for completing and/or monitoring the measure and include the circumstances and/or timing for implementation.*

VI-4. *Grading, soil disturbance, or compaction shall not occur during periods of rain or on ground that contains freestanding water. Soil that has been soaked and wetted by rain or any other cause shall not be compacted until completely drained and until the moisture content is within the limit approved by a Soils Engineer. Approval by a Soils Engineer shall be obtained prior to the continuance of grading operations. Confirmation of this approval shall be provided to the Engineering Department prior to commencement of grading.*

d. Expansive soils shrink/swell when subjected to moisture fluctuations, which can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Building damage due to volume changes associated with expansive soils can be reduced by performing proper moisture conditioning and compaction of fill materials within selected ranges to reduce their swell potential, and using structurally reinforced "rigid" mats or post-tensioned mats designed to resist the deflections associated with soil expansion. The Geotechnical Investigation indicates that a high shrink-swell potential exists in the soils underlying the site. Therefore, because of the presence of expansive soils on the site, a ***potentially significant*** impact could occur to people and/or structures.

Mitigation Measure
Implementation of the following mitigation measure would ensure the impacts are *less-than-significant*.

VI-5. *Implement Mitigation Measure VI-1.*

e. The project has been designed to connect to the City's existing sewer system. Therefore, ***no impact*** would occur related to soils incapable of adequately supporting the use of septic tanks.

VII.	**GREENHOUSE GAS EMISSIONS.** *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	✖	☐
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	☐	☐	✖	☐

Discussion

a,b. Implementation of the proposed project would cumulatively contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O). Sources of GHG emissions include area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

It should be noted that the BAAQMD was challenged in the Alameda County Superior Court, and was ordered to set aside the proposed thresholds of significance and screening criteria.[8] However, the City of Brentwood has determined that the BAAQMD thresholds of significance are the best available option for evaluation of GHG impacts for the project and, thus, are used in this analysis.

The BAAQMD identifies screening criteria for development projects, which provide a conservative indication of whether a development could result in a potentially significant impact associated with GHG emissions. If the screening criterion for GHG is met by a project, a detailed assessment of that project's GHG emissions would not be required. The operational GHG screening criterion for a single-family residential development is if the development is less than or equal to 56 dwelling units. Because the proposed project consists of a total of 296 single-family residential dwelling units, a detailed GHG assessment is required for the proposed project.

The BAAQMD threshold of significance for project-level operational GHG emissions is 1,100 $MTCO_2e$/yr or 4.6 $MTCO_2e$ per service population, per year ($MTCO_2e$/SP/yr). Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. As such, BAAQMD has not

[8] As explained previously, the BAAQMD was challenged in Superior Court, on the basis that the BAAQMD failed to comply with CEQA when it adopted its CEQA guidelines. The BAAQMD was ordered to set aside the proposed thresholds and conduct CEQA review of the thresholds. On August 13, 2013, the First District Court of Appeal reversed the trial court's decision. The Court of Appeal's held that CEQA does not require BAAQMD to prepare an EIR before adopting thresholds of significance to assist in determining whether air emissions of proposed projects might be deemed "significant." The Court of Appeal's decision provides the means by which BAAQMD may ultimately reinstate the GHG emissions thresholds, though the court's decision does not become immediately effective.

established a threshold of significance for construction-related GHG emissions and does not require quantification.

Analysis of the proposed project's operational GHG emissions included estimations of CO_2, N_2O, and CH_4 emissions and was conducted using CalEEMod. According to the CalEEMod results, the proposed project would result in estimated unmitigated operational GHG emissions of 3,375.46 $MTCO_2e$/yr. However, applying the City's 3.1 persons per household statistic to the proposed project's 296 units, the proposed project would result in a service population of 918 persons. Accordingly, the proposed project's GHG emissions would be 3.68 $MTCO_2e$/SP/yr, which would be below the applicable threshold of significance of 4.6 $MTCO_2e$/SP/yr. In addition, it should be noted that implementation of Mitigation Measure III-2 set forth within this IS/MND would further reduce the proposed project's associated GHG emissions in conjunction with criteria pollutant emissions.

Therefore, the project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and impacts associated with the generation of GHG emissions would be considered ***less than significant***.

VIII.	**HAZARDS AND HAZARDOUS MATERIALS.** *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	✖	☐	☐
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	☐	✖	☐	☐
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	✖	☐
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	✖
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	✖
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	✖
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	✖	☐	☐
h.	Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	✖	☐

Discussion

a,b. This section of the IS/MND is primarily based upon the Phase I Environmental Site Assessment prepared for the project site by Papineau R.E.A., June 17, 2003.

Pesticides and other Contaminants

Although mass-graded in 2006, the project site has historically been used for orchards. As a result, as part of the Phase I ESA analysis, 14 near-surface soil samples were collected to determine if chlorinated pesticides are present. DDE and DDT chlorinated pesticide

concentrations were less than 0.079 parts per million (ppm), and DDD concentrations were less than the detection limit of 0.010 ppm. Lead concentrations in the samples ranged from 9.6 ppm to 20 ppm. Arsenic concentrations ranged narrowly from 7.9 ppm to 8.5 ppm. Mercury concentrations ranged from less than 0.06 ppm to 0.31 ppm, except in samples DIAN2-10 (3,900 ppm) and DIAN3-10 (260 ppm). It should be noted that the Phase I ESA concluded that mercury found in sample DIAN3-10 was carried from location DIAN2-10 on the sampling equipment to sample DIAN3-10.

Supplemental and final confirmatory soil samples taken for mercury, in the immediate vicinity of DIAN2-10, were reported in the Phase I ESA to contain concentrations from less than 0.06 ppm to 0.21 ppm. Region IX of the U.S. EPA has established a set of valued called Preliminary Remediation Goals (PRG) for residential land use. PRGs are generic cleanup levels based on evaluation of potential human health risk. The applicable U.S. EPA PRG is 23 ppm for mercury and mercury compounds. Therefore, an indication does not exist in the laboratory screening that the property is impaired with residues remaining from lead, arsenic, mercury, or past application of persistent chlorinated pesticides (Phase I ESA, p. 3).

Asbestos and Lead-based Paint

The Phase I ESA previously identified the need for asbestos and lead-based paint testing due to the presence of a residential structure at 961 Dainty Avenue, which was built prior to the ban of these hazardous materials. However, the residential structure has since been demolished. Other structures are not located on the Palmilla project site. As a result, Mitigation Measures VII-4 and VII-5 of the original Marseilles IS/MND, included as Appendix C to the Marseilles EIR, are no longer required.

PCB Transformers

Two pole-mounted transformers are located on the property, along the north side of Dainty Avenue. Typically, transformers are a health concern if they were installed prior to the late 1970s because they utilized Polychlorinated Biphenyls (PCBs). A number of adverse health effects are associated with this chemical. When PCB fluid is partially burned, as it may be in a transformer fire, the PCB fluid produces by-products, which include polychlorinated dibenzodioxin and polychlorinated dibenzofurans, which are much more toxic than the PCBs themselves. The Phase I ESA did not record the date of installation of the transformers. PCBs were used in electrical transformers because of their useful quality as a fire retardant. PCB transformers were manufactured between 1929 and 1977. The majority of these PCB transformers were installed in apartments, residential and commercial buildings, industrial facilities, campuses, and shopping centers constructed before 1978. Because the date of installation of the transformers is unknown, the potential exists for the transformers to be PCB transformers. The potential exposure of construction workers and future residents to PCB transformers could pose an adverse health impact.

On-site wells and septic tanks

Two to three former residences used to be located on the project site. Although not detected on-site during the Phase I ESA conducted by Papineau, R.E.A. 791, the former residences are expected to have had domestic water wells and septic tanks (Phase I ESA, p. 8). The Phase I ESA recommends that wells and septic tanks, if present, be abandoned according to State and local regulatory requirements.

Conclusion

Based upon soil sampling at the project site, mercury and other soil contaminants represent a less-than-significant impact to the project. In addition, because older structures are not present on-site, asbestos and lead-based paint do not pose a health concern for the project. However, if PCB transformers are present along the site boundaries, a ***potentially significant*** impact could result if construction workers and/or future residents come into contact with their hazardous contents. In addition, if former wells and/or septic tanks are discovered during on-site excavation for utilities, a potentially significant impact could result if these features are not abandoned properly.

Mitigation Measures
Implementation of the following mitigation measures would mitigate potential impacts to a *less-than-significant* level.

VIII-1 *The applicant/developer shall pay appropriate fees for PG&E to sample and analyze the contents of the project site transformers. This shall occur prior to occupancy. If the transformers are found to be PCB transformers, the maintenance and/or disposal of the transformers will be subject to the regulations of the Toxic Substances Control Act under the Authority of the Contra Costa County Environmental Health Department. [MM VII-6 of the original Marseilles IS/MND]*

VIII-2. *Prior to the issuance of grading permits, a licensed well drilling contractor shall abandon any water wells in compliance with Contra Costa County Environmental Health standards. Confirmation of the abandonment shall be submitted to the City Building Official. [MM VII-7 of the original Marseilles IS/MND]*

VIII-3. *Prior to the issuance of grading permits, any onsite septic tanks shall be abandoned in compliance with Contra Costa County Environmental Health Department standards. Confirmation of the abandonment shall be submitted to the City Building Official. [MM VII-8 of the original Marseilles IS/MND]*

c. Brentwood Elementary School is the nearest school to the project site. The parking lot boundary of the school is located approximately ¼ mile from the southernmost (nearest) boundary of the project site. Therefore, the activity areas of the elementary school are located beyond ¼ mile. In addition, the proposed residential project would not routinely transport, use, or disposal of hazardous materials. Any household chemicals, such as fertilizers and vehicle fluids, would be used in small quantities in compliance with label instructions. As a

result, the project would have a ***less-than-significant*** impact with respect to emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d. The project site has not been identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, the proposed project would not create a significant hazard to the public or the environment. Therefore, ***no impact*** would occur.

e-f. The project site is not within an airport land use plan or within two miles of an airport. Therefore, ***no impact*** would occur.

g. During the construction phase, the possibility exists for worker traffic to disrupt the daily flow of traffic, and possibly impede emergency response efforts, should such efforts be necessary. Detailed information relating to the construction schedule during site development is not available. Based on information from other residential developments, Fehr & Peers notes that approximately 5 workers per day are needed for each home under construction, with 1 to 2 deliveries per week of materials for each home. Not all homes are expected to be under construction at the same time and construction workers tend to arrive/depart work sites outside typical commute periods. Assuming 10 percent of homes under construction at the peak of project construction, 205 workers could occur on-site at one time (41 homes with five workers for each home), plus additional people such as building inspectors, foreman, and others. Maximum site activity could result in 500 to 600 daily trips to/from the site, which is less than would be generated by the project at completion. This level of traffic, though short-term, could pose conflicts with respect to maintaining adequate emergency access at the project site. As a result, a short-term ***potentially significant*** emergency access-related impact could occur during the construction phase.

Mitigation Measure

Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

VIII-4. *Prior to the initiation of construction activities, the applicant shall submit a construction management plan to the Brentwood Public Works Department for review and approval, ensuring adequate emergency access and circulation. The plan shall include:*

- *Project staging plan to maximize on-site storage of materials and equipment.*
- *A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak hours; lane closure proceedings; signs, cones, and other warning devices for drivers; and designation of construction access routes.*
- *Permitted construction hours.*
- *Location of construction staging.*
- *Identification of parking areas for construction employees, site visitors, and inspectors, including on-site locations.*
- *Provisions for street sweeping to remove construction related debris*

on public streets.

h. The site is not located within an area where wildland fires occur. The project site is surrounded by existing development, with the exception of a few agricultural parcels, which do not contain notable sources of fire fuel (e.g., wood, dry branches). Therefore, wildfires would result in a ***less-than-significant*** impact to the project.

IX.	**HYDROLOGY AND WATER QUALITY.** *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Violate any water quality standards or waste discharge requirements?	☐	✖	☐	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	✖	☐
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	✖	☐	☐
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	✖	☐	☐
e.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	✖	☐	☐
f.	Otherwise substantially degrade water quality?	☐	✖	☐	☐
g.	Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	✖	☐	☐
h.	Place within a 100-year floodplain structures which would impede or redirect flood flows?	☐	✖	☐	☐
i.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	☐	✖	☐	☐
j.	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	✖

Discussion

a,f. During the early stages of construction activities, topsoil would be exposed due to grading and partial leveling of the site. After grading and leveling and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water

erosion to discharge sediment and/or urban pollutants into stormwater runoff, which would adversely affect water quality.

The State Water Resources Control Board (SWRCB) regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one (1) or more acres. Performance Standard NDCC-13 of the City's National Pollutant Discharge Elimination System (NPDES) permit requires applicants to show proof of coverage under the State's General Construction Permit prior to receipt of any construction permits. The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site. A SWPPP describes Best Management Practices (BMPs) to control or minimize pollutants from entering stormwater and must address both grading/erosion impacts and non-point source pollution impacts of the development project, including post-construction impacts. The City of Brentwood requires all development projects to use BMPs to treat all runoff.

In summary, disturbance of the on-site soils during construction activities could result in a ***potentially significant*** impact to water quality should adequate BMPs not be incorporated during construction in accordance with SWRCB regulations.

Mitigation Measure
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

IX-1. *Prior to issuance of grading permits, the contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The Developer shall file the Notice of Intent (NOI) and associated fee (funded by the applicant) to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of Best Management Practices (BMPs). The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. The SWPPP shall be submitted to the Director of Public Works/City Engineer for review and approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the maximum extent practicable.*

b. The City provides domestic, potable water to its residents using both surface water and groundwater resources. The City has seven (7) active groundwater wells, which provided approximately 30 percent of the potable water supplied during 2010. Brentwood is located within the Tracy Subbasin of the San Joaquin Valley Groundwater Basin. While the project would create new impervious surface area on the site (e.g., approximately 34 acres of new impervious area), the Tracy Subbasin comprises 345,000 acres (539 square miles); therefore, recharge of the groundwater basin within which the project site is located comes from many sources over a broad geographic area. The new impervious surfaces associated with the project would not substantially deplete recharge of the Tracy Subbasin. In addition, according

to DWR Bulletin 118 (2006), the majority of the water levels in wells of the Tracy Subbasin has remained relatively stable.[9]

It is also important note that the City of Brentwood has adequate water supply to meet the demands of the proposed project as well as future anticipated development within the Brentwood General Plan area (as will be explained in detail in Section XVI, Question 'd', of this IS/MND). The project itself does not include installation of any wells, but would rather include connections to existing water lines in Central Boulevard, Walnut Boulevard, and Griffith Lane. Therefore, the project would result in a ***less-than-significant*** impact with respect to substantially depleting groundwater supplies or interfering substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

c-e. The relatively flat project site is within the Marsh Creek watershed. The site was rough-graded in 2006 per the previously approved Marseilles project plans. The site generally drains from the southeast to the northwest. Development of the project would result in the creation of approximately 1,496,409 square feet of new impervious surface area.

All municipalities within Contra Costa County (and the County itself) are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit. Known as the "C.3 Standards," new development and redevelopment projects that create or replace 10,000 or more square feet of impervious surface area must contain and treat stormwater runoff from the site. The proposed project is a C.3 regulated project and is required to include appropriate site design measures, source controls, and hydraulically-sized stormwater treatment measures. Accordingly, the developer will submit a Storm Water Control Plan (SWCP) to the City of Brentwood Public Works Department for review and approval, which will identify source controls and hydraulically-sized stormwater treatment measures. These features will be sized per the Contra Costa County Clean Water Program (CCCCWP) Integrated Management Practice (IMP) sizing calculator to keep the post-construction peak storm flows at or below the pre-construction existing site peak stormwater flow conditions. It is anticipated that on-site storm water would be collected in new storm drain pipes within internal streets, which would route stormwater runoff to proposed bio-retention areas for treatment and detention. Ultimately, most of the stormwater would be routed via pipes to the existing 84-inch storm drain pipe along the northern boundary of the project site, and discharged into Marsh Creek via a new outfall. The remainder of the stormwater would discharge to existing pipes in Griffith Lane or to an existing box culvert in Walnut Boulevard.

Should the water quality treatment and control facilities not be designed and maintained properly, a ***potentially significant*** impact could occur with respect to creating or contributing runoff water which would exceed the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff. In addition, the project site is within the Contra Costa County Flood Control and Water Conservation District, which collects fees from new development to facilitate drainage improvements in the District.

[9] Department of Water Resources. *California's Groundwater Bulletin Update 2003*. Revised January, 20, 2006.

Mitigation Measures

Implementation of the following mitigation measures would reduce the impact to a *less-than-significant* level.

IX-2. *The applicant shall submit a final Storm Water Control Plan (SWCP) to the City of Brentwood Public Works Department for review and approval prior to approval of improvement plans. The SWCP shall comply with C.3 treatment and infiltration requirements, and identify source controls and treatment measures sized according to the Contra Costa County Clean Water Program IMP sizing calculator.*

IX-3. *The applicant shall operate and maintain the stormwater treatment facilities constructed in connection with the project. In addition, the applicant shall be responsible for paying for the long-term maintenance of treatment facilities, and executing a Stormwater Management Facilities Operation and Maintenance Agreement and Right of Entry in the form provided by the City of Brentwood.*

The applicant shall submit, with the application of building permits, a draft Stormwater Facilities and Maintenance Plan, including detailed maintenance requirements and a maintenance schedule for the review and approval by the City Engineer. Typical routine maintenance consists of the following:

- *Examine curb openings. Remove any debris and repair any damaged curb.*
- *Inspect inlets for channels, exposure of soils, or other evidence of erosion. Clear any obstructions and remove any accumulation of sediment.*
- *Inspect outlets for erosion or plugging.*
- *Inspect side slopes for evidence of instability or erosion and correct as necessary.*
- *Observe soil at the bottom of the swale or filter for uniform percolation throughout. If portions of the swale or filter do not drain within 48 hours after the end of a storm, the soil should be tilled and replanted. Remove any debris or accumulations of sediment.*
- *Confirm that check dams and flow spreaders are in place and level and that channelization within the swale or filter is effectively prevented.*
- *Examine the vegetation to ensure that it is healthy and dense enough to provide filtering and to protect soils from erosion. Replenish mulch as necessary, remove fallen leaves and debris, prune large shrubs or trees, and mow turf areas. When mowing, remove no more than 1/3 height of grasses. Confirm that irrigation is adequate and not excessive. Replace dead plants and remove noxious and invasive vegetation.*
- *Abate any potential vectors by filling holes in the ground in and around the swale and by insuring that there are no areas where water stands longer than 48 hours following a storm. If mosquito larvae are*

present and persistent, contact the Contra Costa Mosquito and Vector Control District for information and advice. Mosquito larvicides should be applied only when absolutely necessary and then only by a licensed individual or contractor. [MM 3.8-4 of the Marseilles EIR, as revised in this IS/MND to reflect the updated stormwater system design]

IX-4. Contra Costa County Flood Control & Water Conservation District (CCCFCWCD) drainage fees for the Drainage Areas shall be paid prior to approval of any Final Map. [MM 3.8-3 of the Marseilles EIR]

g-i. According to the June 16, 2009 FEMA Flood Insurance Rate Map (FIRM), Panel ID 06013C0354F, the 100-year flood plain limits (Zones AE) extend into the northwestern portion of the project site, where park and residential uses are proposed.[10] A Conditional Letter of Map Revision (CLOMR) was approved for the site in 2004. A Letter of Map Revision (LOMR) needs to be issued for the Palmilla site by FEMA. Therefore, the project would have a ***potentially significant*** impact with respect placing housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, without FEMA's issuance of a LOMR.

Mitigation Measure
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

IX-5. Prior to issuance of building permits for areas shown within existing special flood hazard areas, as delineated on the applicable FEMA Flood Insurance Rate Maps, a Letter of Map Revision (LOMR) shall be issued by FEMA for the on-site SFHAs. The LOMR shall be submitted to the Brentwood Public Works Department. [MM 3.8-2 of the Marseilles EIR, as appropriately modified in this IS/MND]

j. Tsunamis are defined as sea waves created by undersea fault movement. A tsunami poses little danger away from shorelines; however, when it reaches the shoreline, a high swell of water breaks and washes inland with great force. Waves may reach 50 feet in height on unprotected coasts. The available data indicate a standard decrease of original wave height from the Golden Gate to about half original wave height on the shoreline near Richmond, and to nil at the head of the Carquinez Strait. As Brentwood is several miles inland from the Carquinez Strait, the project site is not exposed to flooding risks from tsunamis and adverse impacts would not result.

A seiche is a long-wavelength, large-scale wave action set up in a closed body of water such as a lake or reservoir, whose destructive capacity is not as great as that of tsunamis. Seiches are known to have occurred during earthquakes, but none have been recorded in the Bay Area. In addition, the project is not located near a closed body of water. Therefore, it is not anticipated that the project site would be impacted by seiches in the future.

[10] Federal Emergency Management Agency. *Flood Insurance Rate Map, 06013C0354F*. June 16, 2009.

Mudflows typically occur in mountainous or hilly terrain. The project site is not considered hilly terrain and mudflows do not pose a threat. In summary, tsunamis, seiches, and mudflows would have ***no impact*** on the project.

X.	**LAND USE AND PLANNING.** *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Physically divide an established community?	☐	☐	✖	☐
b.	Conflict with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating on environmental effect?	☐	☐	✖	☐
c.	Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☐	✖	☐

Discussion

a. The project site comprises the majority of the location of the formerly approved Marseilles residential project. The site location is surrounded by existing development on all sides, though a few areas remain undeveloped. In addition, 112 of the originally approved Marseilles VTM lots have design review approval and are currently in the construction stage; and it is anticipated that these lots would be completed prior to the remaining Palmilla lots. As a result, implementation of the proposed project would essentially serve to fill in the existing surrounding community and make said community more pedestrian-oriented as a result of the multiple connection points included in the project design. Therefore, the proposed project would not divide an existing community and would result in a ***less-than-significant*** impact.

b. As discussed in this IS/MND, the Palmilla project site makes up a large portion of the area encompassed by the formerly approved VTM 8729, originally known as the "Marseilles Project." The City of Brentwood certified an EIR and approved a VTM (8729) for the Marseilles Project in 2005. The approved Marseilles Project included a total of 581 residential units, comprised of 108 multi-family units and 473 single family units. The Palmilla project includes a General Plan Amendment to modify the project site's General Plan designation of Special Planning Area "C" (SPA C) to change roughly 20 acres from High Density Residential to Medium Density Residential.

In terms of consistency with existing zoning, the zoning designation for the site is Planned Development No. 44 (PD-44). The project includes a request to modify the existing development standards for PD-44 in order to establish consistency with the currently proposed uses.

The requested General Plan Amendment and zone modification are policy issues under the purview of the Brentwood City Council. Should City Council approve the requested entitlements, the project would not conflict with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating on environmental effect. This would be considered a ***less-than-significant*** impact.

c. Because the City of Brentwood is a signatory to the ECCC HCP/NCCP, anticipated project

impacts can be mitigated through the payment of Development and Wetland Impact fees to the HCP. The proposed project would comply with the ECCC HCP/NCCP requirements regarding special-status species, and the applicant would be required to pay the associated Wetland Fee and Development Fee to the HCP, as applicable, per Mitigation Measures IV-1, IV-7, and IV-8 above. Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, resulting in a ***less-than-significant*** impact.

XI.	**MINERAL RESOURCES.** *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	✖	☐
b.	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	✖	☐

Discussion

a,b. The 2001 Brentwood General Plan Update EIR identifies coal, oil and gas, and sand as the significant mineral resources within the area. The General Plan identified that the production of coal has not occurred in the area since 1902, and that sand deposits could remain in the western portion of the GP planning area. Oil and gas are presently being produced in the northwest portion of the planning area; and the potential for additional reserves exists throughout the City. The Brentwood General Plan EIR, Figure 3.11-1, identifies an inactive oil/gas well immediately adjacent to the UPRR tracks. The inactive well is not located on the project site. In addition, Figure 3.11-1 does not identify any resources on the project site. Therefore, the project would have a ***less-than-significant*** impact regarding the loss of availability of a known mineral resource that would be of value to the region.

XII.	**NOISE.** *Would the project result in:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	✖	☐	☐
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	✖	☐
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	✖	☐	☐
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	✖	☐	☐
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	✖
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	✖

Discussion

This section is based upon the project-specific noise report prepared by j.c. brennan & associates, Inc., dated February 5, 2014.

a,c. To quantify the existing ambient noise environment in the project vicinity short-term noise level measurements were conducted on the project site on December 2, 2013. Three short-term noise level measurements were taken. The measurements were taken on both sides of Central Boulevard, the primary roadway corridor through the project area. Table 7 provides the ambient noise levels within the project area.

To predict existing noise levels due to traffic, the Federal Highway Administration Highway (FHWA) Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly Leq values for free-flowing traffic conditions.

Table 7
Summary of Existing Background Noise Measurement Data

Site	Location	Ldn	Average Measured Hourly Noise Levels, dB					
			Daytime (7am-10pm)			Nighttime (10pm-7am)		
			Leq	L50	Lmax	Leq	L50	Lmax
Short-term noise level measurements								
1	South of Central Avenue, 75 feet to centerline	NA	59.6	57.2	67.7	@ 11:47 a.m.		
2	South of Central Avenue, 75 feet to centerline	NA	62.6	59.6	74.0	@ 12:10 p.m.		
3	North of Central Avenue, 90 feet to centerline (Behind Ex. 6' CMU wall)	NA	50.3	47.5	61.4	@ 12:30 p.m.		

Source: j.c. brennan & associates, Inc., 2014.

Traffic volumes for existing conditions were obtained from the traffic study prepared for the project (Fehr & Peers, November, 2013). Truck percentages and vehicle speeds on the local area roadways were estimated from field observations. Table 8 shows the existing traffic noise levels in terms of Ldn at closest sensitive receptors along each roadway segment. This table also shows the distances to existing traffic noise contours.

Significance Criteria

The below criteria were used to evaluate the significance of noise resulting from the project:

a. A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the Brentwood General Plan. Specifically, exterior and interior noise levels of 60 dB Ldn and 45 dB Ldn, respectively, for residential uses exposed to transportation noise.
b. A significant impact would be identified if traffic generated by the project would substantially increase noise levels at sensitive receivers in the vicinity. A substantial increase would occur if: a) the noise level increase is 5 dBA Ldn or greater, with a future noise level of less than 60 dBA Ldn; or b) the noise level increase is 3 dBA Ldn or greater, with a future noise level of 60 dBA Ldn or greater.

Project's Traffic Noise Level Impacts to Existing, Nearby Sensitive Receptors

To describe future noise levels due to traffic, the FHWA Traffic Noise Prediction Model (FHWA RD-77-108) was used. Direct inputs to the model included traffic volumes provided by Fehr & Peers.

Significance Criterion "a" – Would traffic from the project cause existing sensitive receptors to experience outdoor noise levels in excess of 60 dB Ldn?

Table 8 shows the predicted traffic noise level increases on the local roadway network for

existing and existing plus project conditions. Table 9 shows the predicted traffic noise level increases on the local roadway network for near term and near term plus project conditions. Table 10 shows the predicted traffic noise level increases on the local roadway network for cumulative and cumulative plus project conditions.

Table 8
Existing and Existing + Project Traffic Noise Levels[1]

Roadway	Segment	Noise Levels (L_{dn}, dB) at Nearest Sensitive Receptors					
		Existing	Existing + Project	Change	Distance to Existing + Project Traffic Noise Contours (feet)[2]		
					70 dB L_{dn}	65 dB L_{dn}	60 dB L_{dn}
Central Blvd	Dainty Ave to Griffith Lane	56.9	58.0	1.0	8	17	37
Central Blvd	Griffith Ave to Palmilla Dr	59.6	60.5[3]	0.9	21	45	97
Central Blvd	East of Palmilla Dr	61.5	62.0	0.6	26	57	123
Dainty Ave	Central Ave to Griffith Lane	57.1	57.2	0.0	8	18	39
Dainty Ave	Griffith Lane to Walnut Blvd	57.8	58.3	0.5	8	18	39
Dainty Ave	East of Walnut Blvd	51.6	51.6	0.0	3	6	14
Griffith Lane	North of Central Blvd	42.8	44.9	2.0	1	2	5
Griffith Lane	Central Blvd to Dainty Ave	55.6	56.7	1.1	6	14	30
Griffith Lane	South of Dainty Ave	56.3	57.0	0.7	7	15	32
Palmilla Dr	North of Central Blvd	N/A	55.7	N/A	7	14	31
Walnut Blvd	Central Blvd to Dainty Ave	57.7	58.7	1.0	13	28	61
Walnut Blvd	South of Dainty Ave	65.4	66.1	0.8	17	36	77

[1] Traffic noise levels do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
[2] Distances to traffic noise contours are measured in feet from the centerlines of the roadways.
[3] It should be noted that on Central Blvd, from Griffith Avenue to Palmilla Drive, predicted noise levels under existing and near term conditions are predicted to increase over 60 dB L_{dn}. However, existing noise sensitive receptors are not located along this segment of roadway. Future residential receptors along this segment will be constructed as part of this project and will have exterior noise control measures implemented to reduce noise levels to 60 dB L_{dn}, or less, as discussed below.

Source: j.c. brennan & associates, Inc. 2014.

Table 9
Near Term and Near Term + Project Traffic Noise Levels[1]

Roadway	Segment	Noise Levels (L_{dn}, dB) at Nearest Sensitive Receptors					
		Near Term	Near Term + Project	Change	Distance to Near Term + Project Traffic Noise Contours (feet)[2]		
					70 dB L_{dn}	65 dB L_{dn}	60 dB L_{dn}
Central Blvd	Dainty Ave to Griffith Lane	57.4	57.9	0.5	8	17	36
Central Blvd	Griffith Ave to Palmilla Dr	60.0	60.8	0.8	22	47	102
Central Blvd	East of Palmilla Dr	61.9	62.4	0.5	28	60	130
Dainty Ave	Central Ave to Griffith Lane	57.2	57.3	0.0	8	18	39
Dainty Ave	Griffith Lane to Walnut Blvd	57.8	58.0	0.2	8	17	37
Dainty Ave	East of Walnut Blvd	51.6	51.6	0.0	3	6	14
Griffith Lane	North of Central Blvd	42.8	44.9	2.0	1	2	5
Griffith Lane	Central Blvd to Dainty Ave	55.9	56.7	0.8	7	14	30
Griffith Lane	South of Dainty Ave	56.5	57.2	0.6	7	15	32
Palmilla Dr	North of Central Blvd	N/A	55.7	N/A	7	14	31
Walnut Blvd	Central Blvd to Dainty Ave	57.9	58.9	0.9	14	29	63
Walnut Blvd	South of Dainty Ave	65.6	66.3	0.7	17	37	79

[1] Traffic noise levels do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
[2] Distances to traffic noise contours are measured in feet from the centerlines of the roadways.

Table 10
Cumulative and Cumulative + Project Traffic Noise Levels[1]

Roadway	Segment	Noise Levels (L_{dn}, dB) at Nearest Sensitive Receptors					
		Cumulative	Cumulative + Project	Change	Distance to Cumulative + Project Traffic Noise Contours (feet)[2]		
					70 dB L_{dn}	65 dB L_{dn}	60 dB L_{dn}
Central Blvd	Dainty Ave to Griffith Lane	58.2	59.0	0.8	9	20	43
Central Blvd	Griffith Ave to Palmilla Dr	60.7	61.4	0.7	24	52	111
Central Blvd	East of Palmilla Dr	62.2	62.7	0.5	29	63	135
Dainty Ave	Central Ave to Griffith Lane	58.5	59.3	0.8	12	25	54
Dainty Ave	Griffith Lane to Walnut Blvd	58.6	58.8	0.1	9	19	41
Dainty Ave	East of Walnut Blvd	53.2	53.2	0.0	4	8	18
Griffith Lane	North of Central Blvd	50.6	51.0	0.4	3	6	13
Griffith Lane	Central Blvd to Dainty Ave	57.0	57.6	0.7	7	16	35
Griffith Lane	South of Dainty Ave	57.4	58.0	0.5	8	17	37
Palmilla Dr	North of Central Blvd	N/A	55.7	N/A	7	14	31
Walnut Blvd	Central Blvd to Dainty Ave	57.3	58.3	1.1	12	27	58
Walnut Blvd	South of Dainty Ave	66.6	67.2	0.6	19	42	90

[1] Traffic noise levels do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
[2] Distances to traffic noise contours are measured in feet from the centerlines of the roadways.

As shown in Tables 8-10, some existing noise-sensitive receptors located along the project-area roadways are currently exposed to exterior traffic noise levels exceeding the City of Brentwood 60 dB L_{dn} exterior noise level standard for residential uses. These tables show that the proposed project, under existing, near-term, and cumulative scenarios, would not cause any additional nearby sensitive receptors, currently experiencing noise levels below 60 dB L_{dn}, to be exposed to traffic noise levels above the City's outdoor noise level standard of 60 dB L_{dn}. It should be noted that on Central Blvd, from Griffith Avenue to Palmilla Drive, predicted noise levels under existing and near-term conditions are predicted to increase over 60 dB L_{dn}. However, existing noise sensitive receptors are not located along this segment of roadway. Future residential receptors along this segment will be constructed as part of this project and will have exterior noise control measures implemented to reduce noise levels to 60 dB L_{dn}, or less, as discussed below. Therefore, this would be a less-than-significant impact relative to the CEQA checklist threshold (a).

Significance Criterion "b" **– Would the project increase traffic noise levels at nearby sensitive receptors above those levels identified in the below table?**

As shown in Tables 8-10, the proposed project, under existing, near-term, and cumulative scenarios, would increase traffic noise levels at nearby sensitive receptors up to 2.0 dBA L_{dn}. These noise level increases associated with the proposed project do not exceed the substantial increase criteria outlined in Table 11 below. Therefore, this would be a less-than-significant impact relative to the CEQA checklist threshold (b).

Table 11
Significance of Changes in Cumulative Noise Exposure

Ambient Noise Level Without Project, Ldn	Increase Required for Significant Impact
<60 dBA	+5.0 dB or more
60-65 dBA	+3.0 dB or more
>65 dBA	+1.5 dB or more

Source: FICON, August 1992.

Noise Level Impacts upon future Project Sensitive Receptors

Traffic – Exterior Noise

The FHWA traffic noise prediction model was used to predict Cumulative + Project traffic noise levels at the proposed residential land uses associated with the project. Table 12 shows the predicted traffic noise levels at the proposed residential uses adjacent to the major project-area arterial roadways. Table 12 indicates the property line noise barrier heights required to achieve compliance with an exterior noise level standard of 60 dB Ldn. Specifically, noise barriers 6 feet in height along Central Avenue would be sufficient to achieve compliance with the City of Brentwood 60 dB Ldn exterior noise level standard for the proposed residential uses (see Figure 4).

Figure 4
Noise Barrier Locations

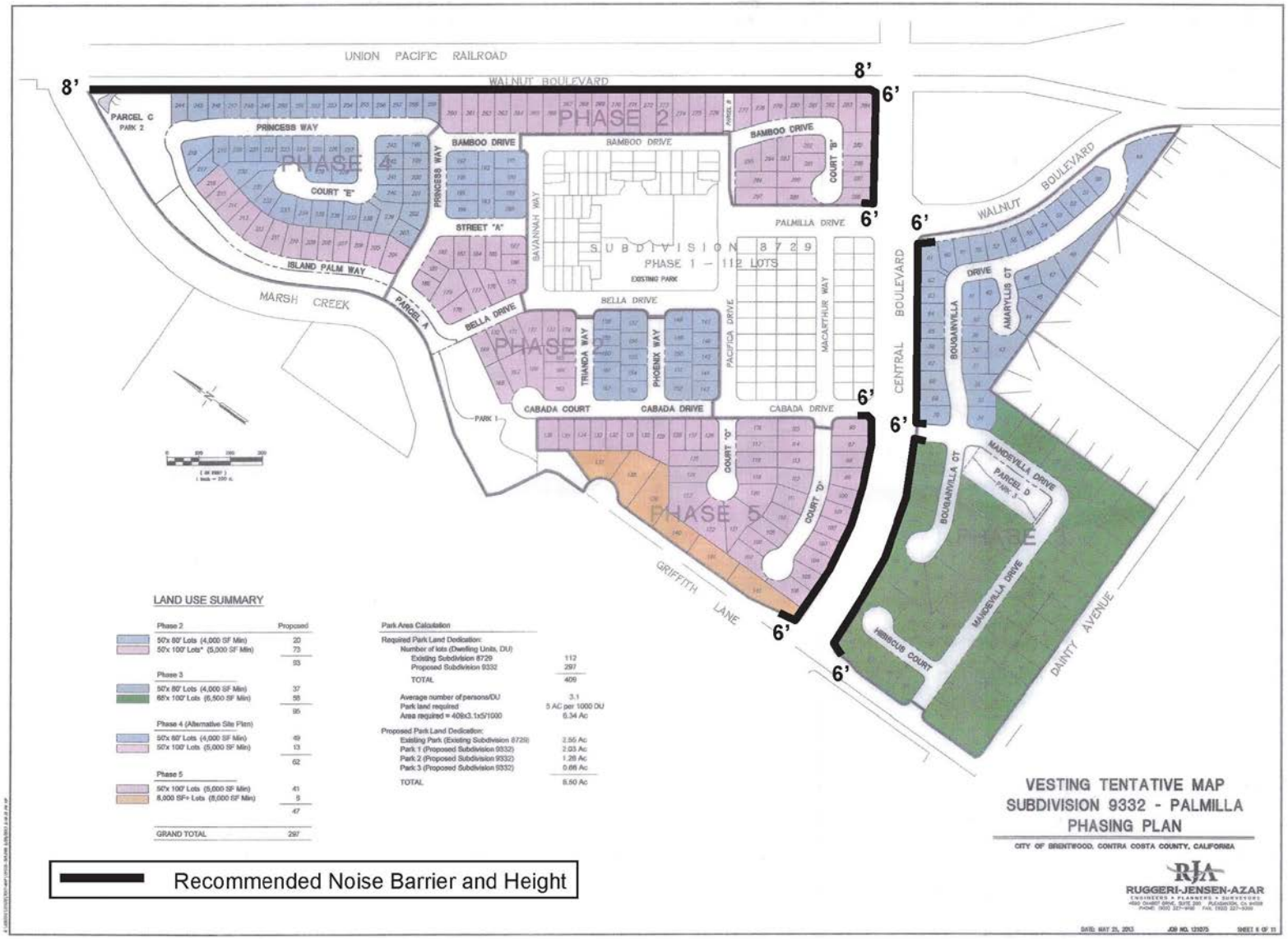


Table 12
Cumulative + Project Transportation Noise Levels at Proposed Residential Uses

Roadway	Receptor Description	Approximate Residential Setback, feet[1]	ADT	Predicted Traffic Noise Levels, Ldn[2]			
				No Wall	6' Wall	7' Wall	8' Wall
Central Blvd.	Backyards / First Floor Façade	95	7,760	61 dB	55 dB	54 dB	53 dB
Walnut Blvd.	Backyards / First Floor Façade	85	9,150	60 dB	--	--	--
Griffith Ave.	Backyards / First Floor Façade	50	3,030	58 dB	--	--	--
Dainty Ave.	Backyards / First Floor Façade	50	3,920	59 dB	--	--	--
Walnut Ave.	Backyards / First Floor Façade	120	Rail	66 dB	61 dB	61 dB	60 dB

[1] Setback distances are measured in feet from the centerlines of the roadways to the center of residential backyards.
[2] The modeled noise barriers assume flat site conditions where roadway elevations, base of wall elevations, and building pad elevations are approximately equivalent.
-- Meets the City of Brentwood exterior noise standard without mitigation. Standard does not apply to second floor facades.

Source: FHWA-RD-77-108 with inputs from Fehr & Peers, and j.c. brennan & associates, Inc. 2014.

Union Pacific Railroad Line (UPRR) – Exterior Noise

The Union Pacific Railroad (UPRR) line bisects the City of Brentwood from the northwest corner of the City to the southeast corner of the City. This portion of the railroad line has not been in use since sometime prior to the year 2000. The line is maintained by UPRR as a standby route with no planned use for freight movement. However, indications are evident that future use of the line could be used for commuter passenger service or future freight service.[11]

Rail operations associated with light rail passenger service are generally quiet in comparison to freight train operations. Although light rail operations may include 50 or more operations per day, the 60 dB CNEL contour will generally not extend more than 100 feet from the railroad track centerline.

To conservatively estimate potential noise impacts associated with railroad line activities, j.c. brennan & associates assumed that up to 10 freight train operations may occur during a 24-hour period. Assuming that each train generated a sound exposure level (SEL) of 100 dB at a distance of 100 feet from the railroad centerline, the Ldn noise level can be calculated using the following equation.

$$Ldn = SEL + 10 \log N_{eq} - 49.4 \text{ dB, where:}$$

SEL is the typical single event sound exposure level of an individual train event (100 dB at a distance of 100 feet), Neq is the sum of the daytime (7 a.m. to 10 p.m.) train events, plus 10 times the number of nighttime (10 p.m. to 7 a.m.) train events (a total of 44), and 49.4 is ten times the logarithm of the number of seconds per day. Assuming an even distribution of

[11] City of Brentwood. City Council. September 23, 2008 Online:
http://www.ci.brentwood.ca.us/citycouncil/pastagenda/packet_2008/ccap20080923/ccap20080923_05.cfm

trains between daytime, evening and nighttime hours, the Ldn would be 67 dB at 100 feet.

The proposed project would locate residential receptors at a distance of approximately 120 feet from the center of the railroad line. At this distance, the predicted exterior noise levels would be 65.8 dB Ldn, and would exceed the City of Brentwood 60 dB Ldn exterior noise level standard. In order to achieve compliance with this standard, an 8-foot tall sound wall would be required along the property line of the residential uses located along Walnut Avenue, as shown in Table 12, and illustrated in Figure 4.

Interior Noise

Modern construction typically provides a 25 dB exterior-to-interior noise level reduction with windows closed. Therefore, sensitive receptors exposed to exterior noise of 70 dB Ldn, or less, will typically comply with the City of Brentwood 45 dB Ldn interior noise level standard. Additional noise reduction measures, such as acoustically-rated windows are generally required for exterior noise levels exceeding 70 dB Ldn.

It should be noted that exterior noise levels are typically 2-3 dB higher at second floor locations. Additionally, noise barriers do not reduce exterior noise levels at second floor locations. The proposed residential uses are predicted to be exposed to first floor exterior transportation noise levels ranging between 58 to 66 dB Ldn (including potential rail operations). Therefore, second floor facades are predicted to be exposed to exterior noise levels of up to 61-69 dB Ldn. Based upon a 25 dB exterior-to-interior noise level reduction, interior noise levels are predicted to range between 36 to 44 dB Ldn. These interior noise levels would comply with the City of Brentwood 45 dB Ldn interior noise level standard.

Conclusion

Traffic noise levels generated by the project would have less-than-significant impacts to existing nearby sensitive receptors, per the relevant significance criteria utilized in this evaluation. However, future traffic noise, and possible UPRR noise, would result in ***potentially significant*** exterior noise impacts to backyard areas of certain project residences, as shown in Table 12, and illustrated in Figure 4. In addition, without incorporation of mechanical ventilation, allowing the closure of doors and windows, interior noise levels experienced at certain project residences could exceed Brentwood's interior noise level standard.

Mitigation Measures
Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

XII-1 *Prior to the approval of Improvement Plans, the plans shall show 6-foot sound walls along Central Boulevard, consistent with Figure 4 of this Initial Study/Mitigated Negative Declaration. Noise barrier walls should be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials. Wood is not recommended due to eventual warping and degradation of acoustical performance. The final*

design of sound walls shall be shown on the project improvements plans and approved by the Community Development Director and the City Engineer. The sound walls shall be installed prior to issuance of occupancy permits for any units along Central Boulevard. [MM 3.4-4(a) through (c) of the Marseilles EIR, as appropriately modified in this IS/MND]

XII-2 *Prior to the approval of Improvement Plans, the plans shall show an 8-foot sound wall along Walnut Avenue, adjacent to proposed residences, consistent with Figure 4 of this Initial Study/Mitigated Negative Declaration. The noise barrier wall should be constructed of concrete panels, concrete masonry units, earthen berms, or any combination of these materials. Wood is not recommended due to eventual warping and degradation of acoustical performance. The final design of sound walls shall be shown on the project improvements plans and approved by the Community Development Director and the City Engineer. The sound wall shall be installed prior to issuance of occupancy permits for any units along Walnut Avenue. [MM 3.4-2 of the Marseilles EIR, as appropriately modified in this IS/MND]*

XII-3 *Prior to issuance of buildings permits for any residential unit, each unit shall include a suitable form of forced-air mechanical ventilation, as determined by the Brentwood Building Official, so that windows could be kept closed at the occupant's discretion to control interior noise and achieve the City's interior 45 dBA Ldn noise standard.*

For windows in the nearest residences adjacent to Central Boulevard and Walnut Boulevard, windows shall be provided with a Sound Transmission Class (STC) 34[a] or higher. All other residences within 250 feet of the Central Boulevard and Walnut Boulevard right-of-way shall be provided with bedroom windows having an STC 32 or higher. This recommendation applies to bedroom windows facing directly or obliquely toward Central Boulevard and Walnut Boulevard. Compliance with this measure shall be included on the building permit drawings for the review and approval by the Building Official prior to the issuance of building permits.

b. The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading and utility placement occur. Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural. Table 13 shows the typical vibration levels produced by construction equipment.

Sensitive receptors could be impacted by construction related vibrations, especially vibratory compactors/rollers. The nearest receptors are located approximately 50 feet or further from any areas of the project site that might require grading or paving. At this distance construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

Table 13
Vibration Levels for Varying Construction Equipment

Type of Equipment	Peak Particle Velocity @ 25 feet (inches/second)	Peak Particle Velocity @ 50 feet (inches/second)	Peak Particle Velocity @ 100 feet (inches/second)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210	0.074	0.026

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Guidelines, May 2006

The Table 13 data indicate that construction vibration levels anticipated for the project are less than the 0.1 in/sec criteria at distances of 50 feet. Therefore, construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors. Accordingly, implementation of the proposed project would have a ***less-than-significant*** vibration impact.

d. Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

Construction activities generate considerable amounts of noise, especially during earth-moving activities when heavy equipment is used. The highest maximum noise levels generated by project construction would typically range from about 90 to 95 dBA at a distance of 50 feet from the noise source. Typical hourly average construction-generated noise levels are about 81 to 88 dBA measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Hourly average noise levels generated by the construction of residential units would range from about 65 to 88 dBA measured at a distance of 50 feet, depending upon the amount of activity at the site. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. Shielding by buildings or terrain often result in lower construction noise levels at distant receptors.

All exterior construction at the project site would be completed first, and once construction moves indoors, minimal noise would be generated at off-site locations. Noise generated by construction activities would temporarily elevate noise levels at adjacent noise-sensitive receptors, but this would be considered a less-than-significant impact if construction activities are conducted in accordance with the provisions of the City of Brentwood General Plan and with the implementation of construction best management practices. Should project

construction not comply with the City's allowable construction hours, nor incorporate construction noise BMPs, a ***potentially significant*** temporary construction noise impact could result.

Mitigation Measure

Implementation of the following mitigation measure would ensure the impact is *less-than-significant*.

XII-4. *The project contractor shall ensure that construction activities shall be limited to the hours set forth in Brentwood Municipal Code Section 9.32.050, as follows:*

Outside Heavy Construction:

Monday-Friday	*8:00 AM to 5:00 PM*
Saturday	*9:00 AM to 4:00 PM*

Outside Carpentry Construction:

Monday-Friday	*7:00 AM to 7:00 PM*
Saturday	*9:00 AM to 5:00 PM*

Construction shall be prohibited on Sundays and City holidays. These criteria shall be included in the grading plan submitted by the developer for review and approval by the Community Development Director prior to grading permit issuance. [MM 3.4-1 of the Marseilles EIR, as appropriately modified in this IS/MND]

e,f. The project site is not located near an existing airport and is not within area covered by an existing airport land use plan. Therefore, ***no impact*** would occur.

XIII. POPULATION AND HOUSING. *Would the project:*		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	✖	☐
b.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	✖	☐
c.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	✖	☐

Discussion

a. According to the Brentwood General Plan (p. II. 1-25), Special Planning Area (SPA) C was anticipated to be built out with the following land uses:

- LDR – 20 acres
- MDR – 38 acres
- HDR – 19 acres
- Public – 4 acres

Because the entirety of SPA C, including the Palmilla VTM area, is planned for single family, low density residential uses, the proposed density for SPA C is less than that which is anticipated in the General Plan. As a result, the population growth associated with buildout of the project site has already been anticipated in the General Plan. It follows that the project would have a ***less-than-significant*** impact with respect to inducing substantial population growth.

b,c. The project site is not currently occupied. While a few homes were constructed on the project site after approval of the Marseilles Project, these homes have been vandalized over time and all but seven houses have been demolished to make way for William Lyon Homes' El Sol and Cielo developments. Therefore, approval and implementation of the proposed project would neither displace housing nor necessitate the construction of replacement housing; and the project would result in a ***less-than-significant*** impact.

XIV. PUBLIC SERVICES. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Fire protection?	☐	✖	☐	☐
b.	Police protection?	☐	☐	✖	☐
c.	Schools?	☐	✖	☐	☐
d.	Parks?	☐	☐	✖	☐
e.	Other Public Services?	☐	✖	☐	☐

Discussion

a. The proposed project is located within the jurisdiction of the East Contra Costa Fire Protection District (ECCFPD). The District is currently staffed with five stations, with three personnel on duty in each station. The District has one station in Oakley, one in Knightsen, one in Discovery Bay, and two in Brentwood. The current staffing model is being augmented by a FEMA Safer Grant, which expires on November 19, 2014. The Safer Grant is funding two of the District's five stations (Knightsen and downtown Brentwood). The proposed Palmilla development would be served by the downtown Brentwood station. While the project would increase the number of residents within the City of Brentwood, thereby increasing demand for fire protection services, the overall amount of development currently proposed for the formerly-named Marseilles project site (408), including the Palmilla VTM 9332, is less than the amount of development approved for the Marseilles Project (581 units). Given this reduction, the Palmilla project would reduce the demand for fire protection services as compared to the originally approved Marseilles Project. Notwithstanding the above, consistent with the Marseilles EIR, mitigation measures 3.9-5(a) through (f) would be required for the Palmilla Project, the lack of which could result in a ***potentially significant*** impact to fire protection services.

Mitigation Measures

Implementation of the following mitigation measures would reduce the above-impact to a *less-than-significant* level.

XIV-1 *Prior to issuance of building permits, the Applicant/Developer shall comply with all applicable requirements of the Uniform Fire Code and the adopted policies of the East Contra Costa Fire Protection District (ECCFPD). The City's Building Division shall review the building plans to ensure compliance.*

XIV-2 *Prior to issuance of building permits, the Applicant/Developer shall provide an adequate and reliable water supply for fire protection with a minimum fire*

flow of 2,000 gallons per minute (GPM). The required fire flow shall be delivered from not more than two fire hydrants flowing simultaneously while maintaining 20 pounds of residual pressure in the main. The Engineering Department shall ensure the minimum fire flow requirements are satisfied.

XIV-3 *Prior to approval of the final maps, the Applicant/Developer shall provide the number and type of hydrants called for by ECCFPD. Hydrant locations will be determined by the ECCFPD prior to issuance of any encroachment and/or building permits.*

XIV-4 *Prior to commencing construction, the Applicant/Developer shall provide access roadways having all-weather driving surfaces of not less than 20', unobstructed width, and not less than 13'6" of vertical clearance, to within 150 feet of travel distance to all portions of the exterior walls of every building. Access roads shall not exceed 16% grade, shall have a minimum outside turning radius of 42 feet, and must be capable of supporting imposed loads of fire apparatus (32 tons). The City Engineer shall ensure compliance.*

XIV-5 *Prior to issuance of encroachment and/or building permits for improvements, the Applicant/Developer (and all subsequent property owners/homeowners) shall submit plans and specifications to the East Contra Costa Fire Protection District and the City Engineer for review and approval in accordance with codes, regulations, and ordinances administered by the East Contra Costa Fire Protection District and the State Fire Marshal's office.*

XIV-6 *Prior to the issuance of building permits, the Applicant/Developer shall comply with any adopted Fire Protection and Paramedic Service Program adopted by the City Council. [Mitigation Measures 3.9-5(a) through (f)]*

b. The City of Brentwood Police Department would provide police protection services to the project site. Currently, the Police Department has 62 sworn officers and approximately 17 support staff. The Department has a minimum staffing standard of one sergeant and four officers on patrol at all times. While the project would increase the number of residents within the City of Brentwood, thereby increasing demand for police protection services, the overall amount of development currently proposed for the formerly-named Marseilles project site (408), including the Palmilla VTM 9332, is less than the amount of development approved for the Marseilles Project (581 units). Given this reduction, the Palmilla project would reduce the demand for police protection services as compared to the originally approved Marseilles Project. In addition, the project is required to participate in the Brentwood Capital Improvement Financing Program. According to the Police Department, the Palmilla project will be more than adequately served by its existing personnel with the equipment and resources currently available; and the Department does not have any concerns regarding the currently proposed design.[12] As a result, the proposed project would have a ***less-than-significant*** impact with respect to resulting in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause

[12] Doug Silva, Lieutenant, Brentwood Police Department, email communication, December 4, 2013.

significant environmental impacts, in order to maintain acceptable service ratios or response times. Accordingly, mitigation measures 3.9-4(a) and (b) of the Marseilles EIR have been satisfied.

c. The project site is located within the Liberty Union High School District and the Brentwood Union School District (BUSD). Liberty Union High School District (LUHSD) includes three comprehensive high schools: Liberty High, Freedom High, and Heritage High. In addition, the District includes one continuation high school, La Paloma, and one alternative high school, Independence High School. According to the LUHSD, all three comprehensive high school sites were built with a 2,200 student capacity; this capacity is currently being exceeded at all three high schools and facility needs are being met with portables.[13] The LUHSD student generation factors for grades 9-12 are as follows: single-family detached units yield = 0.2074; single-family attached units yield = 0.049; and multi-family units yield = 0.125. With 296 single family units, the project is expected to generate approximately 61 new high school students. Available capacity does not exist to accommodate these additional students.

The BUSD consists of eight elementary schools and three middle schools. The District has a current K-6th grade enrollment of 6,345 with a K-6th capacity of 6,800. The District's current 7-8th grade enrollment is 2,081 with a 7-8th capacity of 1,940.[14] Therefore, the District has excess capacity for another 455 K-6th students, but it is over capacity for grades 7-8th by approximately 141 students. Utilizing the District's current Student Generation Rates, the 296 single family units proposed for the Palmilla Project would introduce approximately 119 new K-6th students (296 * 0.402) to the District and 35 new 7-8th students (296 * 0.118). Available capacity exists to accommodate the additional K-6th students anticipated from the project, but not the new 7-8th grade students.

However, the applicant is required to pay school impact fees. Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "[…] legislative or adjudicative act…involving …the planning, use, or development of real property" (Government Code 65996(b)). Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be "full and complete mitigation."

Because the LUHSD is already over capacity; and the BUSD is over capacity for grades 7-8, adding students to the districts may result in further overcrowding and compromising programs. Therefore, the project would have a ***potentially significant*** impact to current schools.

Mitigation Measure(s)
Consistent with State law, implementation of the following mitigation measure would reduce the impacts to a *less-than-significant* level.

XIV-7. *Prior to building permit issuance for any residential or commercial development, the developer shall submit to the Community Development*

[13] Debra Fogarty, Chief Business Officer, Liberty Union High School District, email communication, November 12, 2013.
[14] Jack Schreder & Associates. *School Facility Needs Analysis for Brentwood Union School District*. July 23, 2013.

Department written proof from the Liberty Union High School District and the Brentwood Union School District that appropriate school mitigation fees have been paid. [MM 3.9-6 of the Marseilles EIR]

d. The Palmilla Project consists of 296 single family residences. Applying the Brentwood standard of 3.1 residents per dwelling unit, the Palmilla Project would create housing for approximately 918 additional residents. The Brentwood General Plan calls for 5 acres of park per 1,000 residents, which means the Palmilla Project needs to provide 4.6 acres of parkland. While the Palmilla Project includes 3.79 acres of parkland, it is appropriate to evaluate Palmilla's parkland requirements within the context of the larger immediate area, which represents the boundaries of the approved Marseilles Project. The total number of units currently proposed for the Marseilles project area is 408 (296 for Palmilla, and 112 lots deemed by the City to be in substantial conformance with the originally approved Marseilles VTM). With a total of 408 units, the park requirements total 6.32 acres (408 dwelling units*3.1*5/1,000). When construction began for the Marseilles Project in 2006, a 2.55-acre park was constructed in the central portion of the Marseilles project site. If Palmilla's 3.79 acres of proposed park is combined with the existing 2.55-acre park, the required total of 6.32 acres of parkland is met (3.79+2.55 = 6.34 acres).

Because the proposed project would dedicate the required share of parkland acreage on-site, when viewed within the context of the overall Marseilles project site parkland requirements (based upon the currently proposed 408 units), the project would have a ***less-than-significant*** impact with respect to resulting in substantial adverse physical impacts associated with the provision of new or physically altered parks, the construction of which could cause significant environmental impacts. Therefore, the current design of the Palmilla VTM satisfies the requirements of Mitigation Measure 3.9-7 of the Marseilles EIR.

e. Brentwood currently has one public library located at 104 Oak Street. Additional libraries exist within public schools located in the City of Brentwood; however, these libraries are intended to serve only the students. Therefore, the Brentwood library serves the needs for the entire general public of the City of Brentwood. The Brentwood library is also part of the Contra Costa County Library System and therefore the library can access any other library within the Contra Costa County Library System to obtain needed materials.

The proposed project would introduce approximately 918 new residents to the City of Brentwood. The introduction of approximately 918 new residents to the City of Brentwood would be expected to create an increased demand on the library's current limited material and personnel resources. Program 1.6.1 under Policy 1.6 of the Brentwood General Plan states that the City should work with the County to provide adequate library facilities and pursue supplemental funding sources. Without the proposed project's contribution of funds, a ***potentially significant*** impact would result to the Brentwood Library as a result of the development of the project.

Mitigation Measure
Implementation of the following mitigation measure would reduce the impacts to a *less-than-significant* level.

XIV-8. *Prior to the recordation of final map(s), the project shall pay its fair share for additional library facilities and/or services by participating in the CFD,*

as determined by the Community Development Department. [MM 3.9-8 of the Marseilles EIR]

XV.	**RECREATION.** *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	✖	☐
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	✖	☐

Discussion

a,b. As explained above in Question 'd' of the Public Services section, the TM for the proposed project includes the required share of parkland acreage on-site, when viewed within the context of the overall Marseilles project site parkland requirements (based upon the currently proposed 408 units). Therefore, the project would have a ***less-than-significant*** impact with respect to resulting in substantial adverse physical impacts associated with the provision of new or physically altered parks, the construction of which could cause significant environmental impacts. Therefore, the current design of the Palmilla VTM satisfies the requirements of Mitigation Measure 3.9-7 of the Marseilles EIR.

XVI. TRANSPORTATION/TRAFFIC. *Would the project:*		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	✖	☐	☐
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	✖	☐	☐
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	✖
d.	Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	✖	☐	☐
e.	Result in inadequate emergency access?	☐	☐	✖	☐
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	✖	☐	☐

Discussion

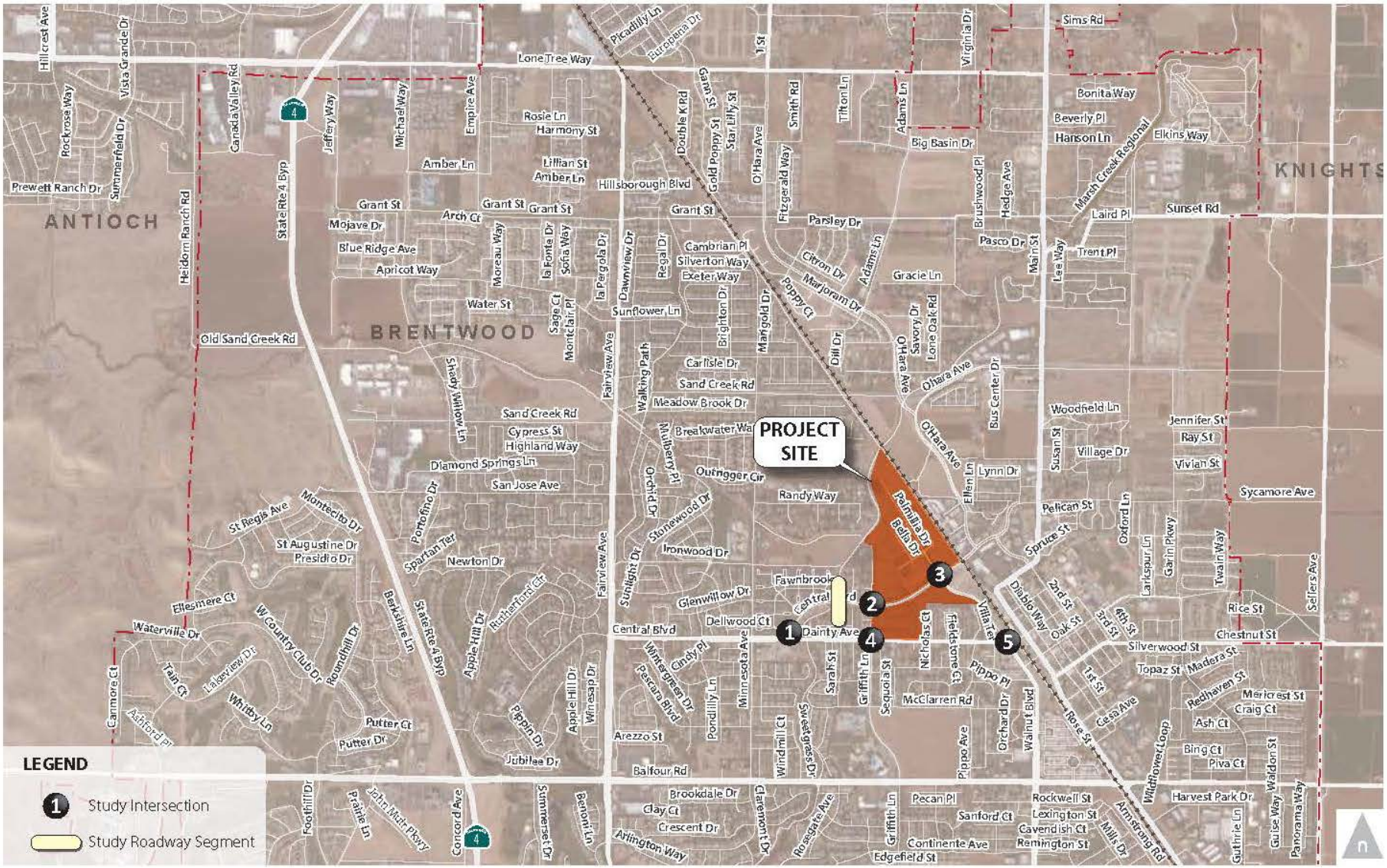
a,b. The following discussion is based on a Traffic Impact Assessment (TIA) prepared for the Palmilla Project by Fehr & Peers (November 2013). It is important to note that, for engineering purposes, the traffic analysis is based upon development of the overall project site – 409 units[15] – in order to determine which traffic mitigation measures, identified in the certified Marseilles EIR, are still required for the less intense development proposal.

Analysis Methodology

Based upon the project's location, as well as the study facilities included in the traffic analysis prepared for the Marseilles Project, Fehr & Peers evaluated the following study intersections (see Figure 5):

[15] As discussed above, the current total is 408 single-family units due to the elimination of one lot after completion of the traffic study.

Figure 5
Study Intersections



Source: Fehr & Peers, November 2013

1. Central Boulevard at Dainty Avenue
2. Central Boulevard at Griffith Lane
3. Central Boulevard at Walnut Boulevard
4. Dainty Avenue at Griffith Lane
5. Dainty Avenue at Walnut Boulevard

A daily roadway segment analysis was conducted for Central Boulevard at Marsh Creek because the bridge over Marsh Creek is ultimately planned to be widened from two lanes to four lanes.

The following traffic scenarios were evaluated by Fehr & Peers:

- **Existing** – Existing (2013) conditions based on recent traffic counts.
- **Existing with Project** – Existing (2013) conditions with project-related traffic.
- **Near-Term without Project** – Existing (2013) conditions with approved projects within the study area that could be constructed over the next ten years.
- **Near-Term with Project** – Near-Term conditions with project-related traffic.
- **Cumulative without Project** – Forecasts for the cumulative scenario based on traffic growth trends as described in the Brentwood General Plan EIR, and supplemented by a check of traffic forecasts for the study area in the most recent Contra Costa Countywide Travel Demand Model.
- **Cumulative with Project** – Future forecast conditions with project-related traffic.

The 2003 transportation analysis for the site (i.e., Marseilles Project) analyzed peak hour operations of nine intersections in the vicinity of the site. Significant impacts were identified at two intersections with development of then-current project: Central Boulevard at Dainty Avenue and Walnut Boulevard at Dainty Avenue. A traffic signal has been partially installed, but not activated, at the Central Boulevard at Dainty Avenue intersection. Construction of a second bridge over Marsh Creek to permit the widening of Central Boulevard to four travel lanes between Griffith Lane and Dainty Avenue was also planned for construction with the Project. As the currently proposed project is smaller than the approved project for the site, Fehr & Peers' analysis focuses on locations impacted by the previously approved project to identify the timing of construction of those improvements.

Thresholds of Significance

The following thresholds have been utilized to determine the project's potential to generate traffic-related impacts:

- Would the operations of a study intersection decline from LOS low-D (an average delay of 50 seconds for signalized intersections) or better to a high LOS D, LOS E or F, based on the HCM LOS method, with the addition of project traffic?
- Would the project deteriorate already unacceptable operations at a signalized intersection by adding traffic?
- Would the operations of an unsignalized study intersection decline from an acceptable level to an unacceptable level with the addition of project traffic, and would the installation of a traffic signal at an unsignalized intersection, based on the

Manual on Uniform Traffic Control Devices (MUTCD) Peak Hour Signal Warrant (Warrant 3), be warranted?

- Would the project increase traffic volumes on a street beyond the expected capacity limits and would the increase in traffic be noticeable to existing residents?

Existing Conditions

Weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak period intersection turning movement counts were collected at the study intersections, including separate counts of pedestrians and bicyclists. At the Dainty Boulevard at Griffith Lane, and Central Boulevard at Walnut Boulevard intersections, traffic counts were also collected from 1:30 to 4:00 PM to determine if traffic volumes through these intersections are higher around school dismissal times. For the study intersections, the single hour with the highest traffic volumes during the count periods was identified. The AM peak hour in the study area is generally 7:30 to 8:30 AM and the afternoon peak hour is generally from 4:15 to 5:15 PM.

At the two intersections where afternoon and evening counts were collected, the difference in traffic volumes between the afternoon and evening peak hours was less than one percent.

As shown in Table 14, all intersections currently operate within the level of service standards set by the City of Brentwood.

Table 14
Existing Conditions Peak Hour Intersection LOS Summary

Intersection	Control	Peak Hour	Delay	LOS
1. Central Boulevard at Dainty Avenue	AWCS	AM PM	13 11	B B
2. Central Boulevard at Griffith Lane	Signal	AM PM	11 9	B A
3. Central Boulevard at Walnut Boulevard	Signal	AM PM	12 9	B A
4. Dainty Avenue at Griffith Lane	AWSC	AM PM	12 11	B B
5. Dainty Avenue at Walnut Boulevard	SSSC	AM PM	7 (22) 6 (17)	A (C) A (C)

Source: Fehr & Peers, November 2013

1. AWSC = All-Way Stop-Control; Signal = signalized intersection; SSSC = Side-Street Stop-Control
2. Average intersection delay is calculated for all signalized intersections using the 2010 HCM method for vehicles. For SSSC intersections, delay presented for intersection average (worst movement).

Automatic machine traffic counts were conducted over a 72-hour period (Tuesday through Thursday) on clear days in September 2013 with area schools in session on Central Boulevard at Marsh Creek. Counts collected during the school year are representative of typical traffic conditions for the majority of the year. Central Boulevard carries approximately 4,330 vehicles per day over Marsh Creek, with a variation in daily volume of approximately one percent between the days of data collection. Two-lane roadways are able to accommodate 10,000 to 15,000 vehicles per day, depending on other roadway characteristics such as intersection spacing and type of traffic control.

Existing with Project Conditions

The project trip generation was estimated using rates and equations from the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition). Trips were calculated by applying the applicable rate to the proposed use, as presented in Table 15. The proposed Palmilla Project is expected to generate approximately 3,800 vehicle trips on a daily basis, with approximately 300 trips during the morning peak hour and 375 trips during the afternoon peak hour. For informational purposes, peak hour trips for the previously approved project are shown in Table 15. The currently proposed project would generate fewer peak hour trips than the approved project.

Table 15
Project Trip Generation Estimate

Project	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed Palmilla Project 409 single family units	3,840	74	222	296	235	138	373
Approved Marseilles Project 471 single family units and 108 multi-family units		96	312	408	282	155	437
Difference		-22	-90	-112	-47	-17	-64

Source: Fehr & Peers, November 2013

Intersection LOS

The Existing with Project intersection analysis results are presented in Table 16. The addition of project traffic would increase average delay at the study intersections slightly, but the delay would not cause overall intersection operations to degrade. Under Existing with Project conditions, none of the non-signalized intersections would meet signal warrants in either the morning or afternoon peak hours.

Roadway Analysis

The amount of project traffic that is expected to travel on Central Boulevard was estimated based on the project trip generation and trip distribution. With the project, traffic volumes are expected to increase on Central Boulevard by approximately 1,030 vehicles per day, resulting in approximately 5,360 vehicles a day traveling over Marsh Creek at Central Boulevard. This level of traffic would be accommodated by the existing two-lane bridge.

Near-Term without Project and Near-Term with Project Conditions

The near-term scenario reflects existing traffic counts plus traffic from approved and pending developments. Therefore, the near-term condition represents the likely traffic levels with the completion of the proposed Palmilla project. The latest City of Brentwood Project Status Report (April 1, 2013 for commercial projects and July 1, 2013 for residential projects) provides a list of approved developments. Based on a review of the list, a number of developments were identified that could generate additional traffic through the study area.[16]

[16] These proposed developments are listed in Table 8 of the TIA, which is available at City Hall for review.

Traffic generated by approved and pending developments was added to the existing traffic volumes to provide the basis for the Near-Term without Project analysis. Project traffic volumes were added to the Near-Term without Project forecasts to estimate Near-Term with Project volumes at the study intersections.

Table 16
Existing with Project Conditions Peak Hour Intersection LOS Summary

Intersection	Control	Peak Hour	Existing		Existing with Project	
			Delay	LOS	Delay	LOS
1. Central Boulevard at Dainty Avenue	AWCS	AM	13	B	14	B
		PM	11	B	11	B
2. Central Boulevard at Griffith Lane	Signal	AM	11	B	11	B
		PM	9	A	10	A
3. Central Boulevard at Walnut Boulevard	Signal	AM	12	B	15	B
		PM	9	A	14	B
4. Dainty Avenue at Griffith Lane	AWSC	AM	12	B	12	B
		PM	11	B	11	B
5. Dainty Avenue at Walnut Boulevard	SSSC	AM	7 (22)	A (C)	8 (27)	A (D)
		PM	6 (17)	A (C)	6 (19)	A (C)

Source: Fehr & Peers, November 2013

1. AWSC = All-Way Stop-Control; Signal = signalized intersection; SSSC = Side-Street Stop-Control
2. Average intersection delay is calculated for all signalized intersections using the 2010 HCM method for vehicles. For SSSC intersections, delay presented for intersection average (worst movement).

Intersection LOS

Near-Term without Project and Near-Term with Project analyses results are presented in Table 17. Intersections in the vicinity of the project site are expected to continue operating at acceptable service levels with construction and occupation of approved and pending projects in the vicinity of the site. With the addition of project traffic, intersections would continue to operate at acceptable service levels and no improvements were identified based on the significance criteria.

Under Near-Term without and with Project conditions, none of the non-signalized intersections would meet signal warrants in either the morning or afternoon peak hours.

Table 17
Near-Term without Project and Near-Term with Project Conditions Peak Hour Intersection LOS Summary

Intersection	Control	Peak Hour	Near-Term without Project		Near-Term with Project	
			Delay	LOS	Delay	LOS
1. Central Boulevard at Dainty Avenue	AWCS	AM PM	14 11	B B	15 11	B B
2. Central Boulevard at Griffith Lane	Signal	AM PM	11 9	B A	11 11	B B
3. Central Boulevard at Walnut Boulevard	Signal	AM PM	12 9	B A	15 14	B B
4. Dainty Avenue at Griffith Lane	AWSC	AM PM	12 11	B B	13 11	B B
5. Dainty Avenue at Walnut Boulevard	SSSC	AM PM	7 (23) 6 (17)	A (C) A (C)	8 (28) 6 (20)	A (D) A (C)

Source: Fehr & Peers, November 2013

1. AWSC = All-Way Stop-Control; Signal = signalized intersection; SSSC = Side-Street Stop-Control
2. Average intersection delay is calculated for all signalized intersections using the 2010 HCM method for vehicles. For SSSC intersections, delay presented for intersection average (worst movement).

Roadway Segments

Daily traffic from approved and pending projects was also assigned to the roadway system to estimate near-term daily traffic volumes on Central Boulevard at Marsh Creek. Project traffic was added to the resulting volume to estimate Near-Term with Project volumes. Traffic from approved and pending projects is expected to increase daily traffic on Central Boulevard by approximately 530 vehicles, with the project increasing volumes by an additional 1,030 vehicles per day, resulting in approximately 5,890 vehicles per day traveling over Marsh Creek at Central Boulevard in the next ten years. This level of traffic would be accommodated by the existing two-lane bridge.

Cumulative without Project and Cumulative with Project Conditions (Year 2030)

To assess future growth through the City with planned development, the Contra Costa County Travel Demand Model (CCTA Model) was used to assess citywide vehicular travel changes. It is anticipated that traffic would increase in the project vicinity due to an increase in residential and employment uses within the City of Brentwood and surrounding areas. The current CCTA model shows an additional 6,100 households and 7,000 jobs in Brentwood by 2040. In that timeframe, Brentwood would have a total of 25,500 households, a population of approximately 79,700 people and approximately 14,500 jobs.

Forecasts were developed based upon CCTA's Technical Procedures, which specify a link-level adjustment procedure that adds the amount of growth projected by the model to the existing volumes. This process was completed for daily, AM and PM peak hour forecasts, including intersection turning movement volumes, and the Central Boulevard roadway segment.

Intersection LOS

Cumulative without Project and Cumulative with Project analyses results are presented in Table 18. As shown in Table 18, the study intersections are projected to operate at acceptable service levels in the Cumulative without Project condition and the addition of Project traffic would not result in deficient conditions.

Under Cumulative without and with Project conditions, none of the non-signalized intersections would meet signal warrants in either the morning or afternoon peak hours.

Roadway Analysis

The CCTA model was used to estimate changes in daily traffic volumes on Central Boulevard at Marsh Creek. Project traffic was added to the resulting volume to estimate Cumulative with Project volumes. Traffic from development in Brentwood, consistent with the General Plan, is expected to increase daily traffic on Central Boulevard by approximately 1,430 vehicles, with the project increasing volumes by an additional 1,030 vehicles per day, resulting in approximately 6,790 vehicles per day traveling over Marsh Creek at Central Boulevard in the next 20 to 30 years. This level of traffic would be accommodated by the existing two-lane bridge.

Table 18
Cumulative without Project and Cumulative with Project Conditions Peak Hour Intersection LOS Summary

Intersection	Control	Peak Hour	Cumulative without Project		Cumulative with Project	
			Delay	LOS	Delay	LOS
1. Central Boulevard at Dainty Avenue	AWCS	AM PM	21 11	C B	24 12.4	C B
2. Central Boulevard at Griffith Lane	Signal	AM PM	12 11	B B	12.2 11	B B
3. Central Boulevard at Walnut Boulevard	Signal	AM PM	13 8	B A	19.9 14.5	B B
4. Dainty Avenue at Griffith Lane	AWSC	AM PM	13 12	B B	14.4 12.1	B B
5. Dainty Avenue at Walnut Boulevard	SSSC	AM PM	9 (36) 7 (25)	A (E) A (C)	12 (46) 7 (30)	B (E) A (D)

Source: Fehr & Peers, November 2013

1. AWSC = All-Way Stop-Control; Signal = signalized intersection; SSSC = Side-Street Stop-Control
2. Average intersection delay is calculated for all signalized intersections using the 2010 HCM method for vehicles. For SSSC intersections, delay presented for intersection average (worst movement).

Conclusion

Because the proposed project would contribute to cumulative traffic volumes in the area, and would benefit from planned regional and local roadway improvements, the project applicant shall be required to contribute to regional and local roadway improvements through the payment of fees to the East Contra Costa Regional Fee and Financing Authority (ECCRFFA) and the local City of Brentwood Traffic Impact Fees.

Prior analyses conducted for the site concluded that signalization of the Central Boulevard at Dainty Avenue and Dainty Avenue at Walnut Boulevard would be warranted based on projected traffic volumes with the previously approved project. Results of this assessment indicate that signalization of those intersections is not warranted in the existing, near-term or cumulative scenarios, without or with the Palmilla Project. As a result, Mitigation Measures 3.3-1 (signal at Central/Dainty) and 3.3-2/3.3-3 (signal and lane improvements at Walnut/Dainty) from the Marseilles EIR are no longer required. However, a traffic signal has already been partially installed at the Central Boulevard at Dainty Avenue intersection, although the signal is not yet activated. The conditions of approval for the Approved Marseilles development require that the signal be completed and activated with the issuance of Building Permit number 201. This condition will remain and become a conditional of approval for the proposed project. Signalization would provide a protected pedestrian crossing at this location, enhancing pedestrian and bicycle connectivity in the area.

The analysis also concludes that based on the existing and projected traffic volumes on Central Boulevard at Marsh Creek, widening of the roadway is not needed to accommodate existing or projected daily traffic volumes. Additionally, the intersections on either side of the bridge operate at acceptable service levels. However, the widening is identified in the City's General Plan Circulation Element and is included in the City's Capital Improvement Program. Without the widening of the bridge, the lane transitions from a four-lane road to a two-lane road would continue to occur approximately 300 feet west of Griffith Lane on Central Boulevard. The project applicant would pay their fair share towards bridge construction through the payment of local fees.

Without payment of traffic regional and local traffic impact fees, the project would have a ***potentially significant*** traffic impact.

Mitigation Measures

Implementation of the following mitigation measures would reduce the above impacts to a *less-than-significant* level.

XVI-1. *Prior to building permit issuance, the developer shall pay the roadway impact fee as the project's fair share towards the four-lane bridge over Marsh Creek at Central Boulevard, as determined by the City Engineer.*

XVI-2. *Prior to building permit issuance, the developer shall pay the East Contra Costa Regional Fee and Financing Authority (ECCRFFA) fees to the City of Brentwood.*

c. The proposed project would not require any changes to existing regional air traffic activity and the project site is not located near an airport. Therefore, ***no impact*** would occur.

d. Hazardous design features are oftentimes assessed in CEQA analyses by determining whether proposed site access and on-site circulation would be sufficient. For the Palmilla Project, vehicular site access would occur at the following locations: (1) the existing traffic signal at Central Boulevard at Walnut Boulevard/Palmilla Drive; (2) Walnut Boulevard via a

driveway south of the Central Boulevard at Walnut Boulevard intersection; (3) two right-in/right-out roadways on Central Boulevard via roadways west of the intersection of Central Boulevard at Walnut Boulevard that serve the northern and southern portions of the site; (4) Griffith Lane via a roadway south of the intersection of Griffith Lane at Central Boulevard; and (5) direct access from Griffith Lane (6 homes) and Dainty Avenue (14 homes). Operations of the non-signalized access locations are presented in Table 19.

Vehicles waiting to turn from project roadways to the main circulation system would experience an average delay of 10 to 12 seconds. These intersections would operate within acceptable levels of delay as side-street stop-control intersections and no additional traffic control is recommended.

Table 19
Cumulative with Project Conditions
Peak Hour Driveway LOS Summary

Intersection	Control	Peak Hour	Cumulative with Project	
			Delay	LOS
1. Central Boulevard at Right-in/Right-out	SSSC	AM PM	0 (11) 0 (11)	A (B) A (B)
2. Griffith Lane at Mandevilla	SSSC	AM PM	1 (11) 3 (9)	A (B) A (A)
3. Walnut Boulevard at Bougainvilla Drive	SSSC	AM PM	0 (12) 0 (12)	A (B) A (B)

Source: Fehr & Peers, November 2013

1. SSSC = Side-Street Stop-Control
2. Delay is presented for intersection average (side-street movement), based on 2010 HCM method for vehicles.

The project site plan includes various east-west/north-south collector roadways in a modified grid system. On the portion of the site located north of Central Boulevard, multiple routes are available to access individual dwelling units with a minimum number of dead-end roadways. A review of the site plan indicates that the proposed roadways generally correspond to the City of Brentwood Standard Plans and Specifications (2007). However, Fehr & Peers has noted that the minor streets with 46-foot right-of-way are missing a 5-foot planting strip and do not match any of the standard plans. In addition, the Marseilles EIR recommended certain parking restrictions at project entrances for visibility purposes. As a result, the proposed project could result in ***potentially significant*** impacts related to hazardous design features.

Mitigation Measures

Implementation of the following mitigation measures would reduce the above impacts to a *less-than-significant* level.

XVI-3. *Prior to recordation of any final map, the on-site street cross-sections shown on the Map shall conform to the City of Brentwood's Standard Plans and Specifications for review and approval by the City Engineer.*

XVI-4. The Applicant/Developer shall submit a development plan, which incorporates the following improvements to the satisfaction of the City Engineer prior to issuance of building permits.

- *The project site plan shall be revised to indicate that parking shall be restricted to within 50 feet of the project entrances; and*
- *The project site plan shall be revised to provide a 12-foot travel lane on the Main Entry Boulevard and an 8-foot bike lane. [MM 3.3-5 of the Marseilles EIR]*

e. The project site plan shows five vehicle access points for emergency vehicles, plus potential for an access point from the Griffith Lane cul-de-sac, north of Central Boulevard. The portion of the project north of Central Boulevard would be accessible via three of these locations, while the residential units south of Central Boulevard would have three emergency vehicle access points. The project entry points provide sufficient width to accommodate turning movements of large emergency vehicles.

The interior project roadways conform to adopted City of Brentwood roadway design standards. The travel lane width meets or exceeds standards and the parallel parking lanes also meet City standards. Therefore, Fehr & Peers has deemed it unlikely that an emergency vehicle would be blocked or obstructed while driving within the project site.

In summary, the project would have a ***less-than-significant*** impact with respect to resulting in inadequate emergency access.

f. The proposed project would introduce new residents to the project area, which would increase the number of pedestrians, bicyclists, and transit-riders in the area. The TIA prepared for the proposed project included an analysis of the project's potential effects on the pedestrian, bicycle, and transit systems in the vicinity. Further details and discussion regarding the analysis of alternative transportation is presented below.

Pedestrian and Bicycle Facilities, Access, and Circulation

The existing pedestrian and bicycle facilities in the study area, as well as the proposed project's access to such facilities are discussed below.

<u>Existing Pedestrian and Bicycle Facilities</u>

Pedestrian facilities in the study area include sidewalks, crosswalks, pedestrian signals and multi-use trails. Roadways in the study area generally provide sidewalks on both sides of the street, except along some portions of the project frontage on Walnut Boulevard and Griffith Lane where sidewalks would be constructed with the project. At the signalized intersections of Central Boulevard / Griffith Lane and Central Boulevard / Walnut Boulevard, crosswalks are provided across all legs of the intersection with pedestrian push-button actuated signals. Crosswalks are also provided at other intersections in the study area. A mid-block pedestrian and bicycle crossing of the Marsh Creek Trail is located on the two-lane portion of Central Boulevard, as well as on Dainty Avenue. The crosswalks are painted with high visibility

markings, flashing lights, and signage to alert drivers that pedestrians/bicyclists may be present. The Dainty Avenue crossing also has pedestrian actuated flashing lights.

Central Boulevard, Griffith Lane, and Walnut Boulevard have Class II bicycle facilities with separate lanes designated for bicycle travel.[17] They connect with the Marsh Creek Trail, which forms the northwestern portion of the project site and connects Big Break Regional Park in Oakley to Concord Avenue at the southern City of Brentwood city limits.

Proposed Project Pedestrian Access and Circulation

The proposed project would provide five-foot-wide sidewalks on all internal roadways. Internal connections from the park areas to the Marsh Creek Trail would also be provided. The project has the potential to increase pedestrian and vehicular traffic at the two mid-block uncontrolled crossings of the Marsh Creek Trail: Central Boulevard and Dainty Avenue. A crosswalk evaluation was conducted using existing traffic volumes, potential increases in auto traffic along the corridors, and pedestrian demand and design characteristics of Central Boulevard and Dainty Avenue to determine if additional crosswalk treatments would be appropriate for these locations.

Based on the current characteristics of Central Boulevard and Dainty Avenue, the current crossing treatments are appropriate. With growth in traffic and a potential increase in pedestrian/bicycle travel along the trail, the Central Boulevard crossing would become a candidate for pedestrian crossing enhancements, such as free standing pedestrian actuated flashers, also known as Rectangular Rapid Flashing Beacons (RRFBs) or stutter flash. Stutter flashing LED lights are used to increase visibility of the pedestrian actuated crossing. The beacons would be activated by pedestrian push button, and would increase yield compliance of motorists. The stutter flash is most effective at increasing yield compliance at long distances. The device has been recently installed at other locations in Brentwood. The RRFB systems received federal blanket approval for use at uncontrolled and school crossing locations in California in 2011.

Although the current trail crossing treatments on Dainty Avenue would remain appropriate with the expected increase in traffic volumes and pedestrian volumes in the area, the TIA recommends additional trail crossing treatment be installed on Central Boulevard. In addition, when Central Boulevard is widened to four lanes, the TIA recommends that a trail undercrossing be constructed or a signalized trail crossing be installed. Furthermore, the proposed project is required to comply with the mitigation measures set forth in the Marseilles EIR.

[17] Bicycle facilities include the following:

- *Bike paths (Class I)* - Paved trails that are separated from roadways, and are shared with pedestrians.
- *Bike lanes (Class II)* - Lanes on roadways designated for use by bicycles through striping, pavement legends, and signs.
- *Bike routes (Class III)* - Roadways designated for bicycle use by signs only; may or may not include additional pavement width for cyclists.

Proposed Project Bicycle Access and Circulation

Bicycle access would be provided by the Marsh Creek Trail and Class II bike lanes on Walnut Boulevard, Central Boulevard, and Griffith Lane. Bicycles would also be permitted in the vehicular travel way within the project's internal street network.

Transit Service and Access

The existing transit services and the proposed project's access to such services are discussed below.

Transit Service

Eastern Contra Costa Transit Authority (Tri Delta Transit) provides transit service in eastern Contra Costa County, serving the communities of Brentwood, Antioch, Oakley, Concord, Discovery Bay, Bay Point and Pittsburg. Thirteen routes operate on weekdays, with four routes operating on weekends. Five routes operate in the vicinity of the project site (300, 385, 386, 391 and 393), all stopping at the Brentwood Park-n-Ride lot located on Walnut Boulevard across the street from the project site.[18]

Transit Access Adjacent to Project Site

The Brentwood Park-n-Ride lot is located on Walnut Boulevard across the street from the project site, with the closest units in the site located about 800 feet from the bus boarding area and the furthest units about three quarters of a mile from the bus boarding area. Five routes serve the study area. Residents on the north side of Central Boulevard would likely use the signalized pedestrian crossing at the Walnut Boulevard at Central Boulevard intersection to cross the street and access the bus area. From the parcels south of Central Boulevard, some residents may cross the street at the uncontrolled project entry at Bougainvilla Drive. As such, the TIA recommends providing a crosswalk at Bougainvilla Drive at Walnut Boulevard to channelize pedestrian movements to the transit stop. In addition, the proposed project is required to comply with the mitigation measures set forth in the Marseilles EIR.

Conclusion

As discussed above, the proposed project is located near an extensive network of pedestrian,

[18] Route 300 provides express weekday service between the Park-n-Ride lot and the Pittsburg BART station via Brentwood Boulevard and State Route 4 on 30-minute headways. Route 385 provides weekday service on hour headways between Brentwood Park-n-Ride and the Antioch Park-n-Ride, where connections to numerous other bus routes are provided. Route 386 connects Brentwood to Discovery Bay, but only operates on school days for Liberty Union High School. One morning bus and one afternoon bus is provided. Route 391 also connects the Brentwood Park-n-Ride lot to the Pittsburg BART station, but this route avoids State Route 4 and provides interim stops to the Antioch Park-n-Ride, Los Medanos College, Somersville Towne Center, and other destinations, operating on 40-minute headways. Route 393 provides weekend service between the study area and Bay Point, with stops at the Antioch Park-n-Ride and the Pittsburg BART station. This route operates on approximately one-hour headways. In addition to the regular transit service to the study area, dial-a-ride door-to-door service within Eastern Contra Costa County is provided by Tri Delta Transit for disabled people of all ages and senior citizens.

bicycle, and transit facilities and services. In order to increase the performance and safety of such facilities and services, the TIA prepared for the proposed project recommends implementation of additional trail crossing treatments and crosswalks. In addition, the proposed project is required to comply with the mitigation measures set forth in the Marseilles EIR. Without compliance with such, the proposed project could result in a ***potentially significant*** impact associated with public transit, bicycle, or pedestrian facilities.

Mitigation Measures

Implementation of the following mitigation measures would reduce the above impact to a *less-than-significant* level.

XVI-5. *Prior to recordation of any final map, the developer shall show implementation and compliance with the recommendations set forth in the TIA prepared for the proposed project by Fehr & Peers (November 2013), subject to review and approval by the City Community Development Department, including the following:*

- *Install additional trail crossing treatments on Central Boulevard potentially including free standing pedestrian actuated flashers; and*
- *Provide a crosswalk at Bougainvilla Drive at Walnut Boulevard to channelize pedestrian movements to the transit stop.*

XVI-6. *Minimize emissions from motor vehicles.*

- *Prior to recording the final map, the applicant shall submit to the City a plan for the construction of bus stops that would serve the project's residents. The final design and location of these bus stops are subject to the approval of the Brentwood City Engineer, Community Development Director, and Tri-Delta Transit.*
- *Prior to recording the final map, the applicant shall submit to the City a site plan showing the location of pedestrian/bike paths designed to minimize travel distance to bus stops, park and ride lots, the future eBART station, and the downtown area. The plan shall be submitted for the review and approval of the City Engineer and Community Development Director. [MM 3.5-2(a) of the Marseilles EIR]*

	XVII. UTILITIES AND SERVICE SYSTEMS. *Would the project:*	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	✖	☐	☐
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	✖	☐
c.	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	✖	☐
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	✖	☐
e.	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	✖	☐	☐
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	✖	☐
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	✖	☐

Discussion

a,e. This discussion will address both available wastewater treatment capacity and wastewater discharge infrastructure to serve the project site.

Wastewater Treatment Plant Capacity

The existing wastewater treatment plant (WWTP) is located on approximately 70 acres of land owned by the City on the north side of Sunset Road and east of SR 4. The WWTP is designed to have sufficient capacity to handle all wastewater flows at buildout per the General Plan. The WWTP has a current treatment capacity of 5 million gallons per day (MGD) with an average dry weather flow of 3.22 MGD.

Buildout of the proposed project would result in the development of 60.6 acres. The Brentwood General Plan EIR (p. 3.7-13) uses a wastewater generation factor of 85 gallons per day per acre of residential development. Therefore, the total wastewater flow from the

project site would be about 0.005 MGD. Therefore, the current capacity of the WWTP would be sufficient to handle the wastewater flow from the proposed project.

In addition, the current WWTP system is designed to expand to 10 mgd in 2.5 mgd increments and the City collects development impact fees from new development to fund future expansion efforts. Phase one of the wastewater plant expansion was completed in 1998-2002, to bring the treatment plant to current levels. The proposed project is required to pay sewer impact fees which will contribute towards the cost of future upgrades, when needed.

Wastewater Infrastructure

The project would involve the construction of necessary wastewater infrastructure to serve the project. The wastewater generated by the project would be collected by an internal sewer system, consisting of 8-inch sewer lines, which would connect to the existing 33-inch sewer trunk along Marsh Creek. The 33-inch trunk line continues north, under the existing railroad tracks, towards the City's wastewater treatment plant. Off-site sewer infrastructure improvements are not required as part of the project.

Conclusion

Because adequate long-term wastewater treatment capacity is available to serve full buildout of the proposed Palmilla Project, and the project includes the extension of adjacent sewer line infrastructure, the project would not be expected to have impacts related to requiring or resulting in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. However, in accordance with the Marseilles EIR, if the developer does not pay sewer impact fees for the project, a ***potentially significant*** impact could result.

Mitigation Measure
Implementation of the following mitigation measure would reduce the impacts to a *less-than-significant* level.

XVII-1 *The Applicant shall be required to pay all applicable fees in effect at the time of building permit issuance. Improvement plans indicating conformance with City of Brentwood Standards shall be prepared, submitted, and approved by the City Engineer prior to the issuance of encroachment permits for this project. [MM 3.9-2 of the Marseilles EIR]*

b,d. While the Palmilla Project would increase the number of residents within the City of Brentwood, thereby increasing demand for water supply, the overall amount of development currently proposed for the formerly-named Marseilles project site (408), including the Palmilla VTM 9332, is less than the amount of development approved for the Marseilles Project (581 units). Given this reduction and the fact that the Palmilla Project was approved in 2005, the Palmilla project would help reduce the demand for water supply assumed for the project site in Brentwood's 2010 Urban Water Management Plan (UWMP).

The 2010 UWMP predicts the water supply available to the City of Brentwood in normal,

single-dry, and multiple-dry years out to 2035. The total supply available in 2035 during all scenarios (normal, single-dry, multiple-dry) well exceeds the projected demand.[19] The future demand projections included in the UWMP are based upon General Plan land uses. Because the Palmilla Project would reduce the amount of water needed for the project site, as compared to the currently approved land use densities, it follows that adequate water supply exists to serve the site per the conclusions of the 2010 UWMP.

The project would involve the construction of the necessary water infrastructure to serve the proposed neighborhoods. The intract system would consist of a network of looped 8-inch water mains that would connect to the existing mains in Central Boulevard, Walnut Boulevard, and Griffith Lane. Off-site water infrastructure improvements are not required as part of the project.

Based upon the above discussion, the project's impact on water supply and delivery would be considered ***less than significant.***

c. As discussed in Questions 'c-e' of Section VIII, Hydrology and Water Quality, of this IS/MND, the proposed drainage system for the project would route runoff into bio-retention areas. The runoff would be stored and metered out to meet hydro-modification requirements per the Contra Costa County Clean Water Program Integrated Management Practice (IMP) sizing calculator. Seven bioretention areas (designated as "IMPs") would be located strategically throughout the project site to treat stormwater runoff. Corresponding underground storage pipes have been included adjacent to the IMPs for storage and metering purposes. Ultimately, after being metered from underground storage pipes, stormwater would be routed via pipes to the existing 84-inch storm drain pipe along the northern boundary of the project site, and discharged into Marsh Creek.

According to the Stormwater Control Plan prepared for the project, the proposed drainage system would keep the post-construction peak storm flows at or below the pre-construction existing site peak stormwater flow conditions. As a result, the project would have a ***less-than-significant*** impact with respect to requiring or resulting in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

f,g. The solid waste from Brentwood is disposed of at Keller Canyon County landfill. The *City of Brentwood General Plan EIR, 2001-2021* determined that solid waste capacity is adequate to serve the demand resulting from General Plan buildout. As discussed above, the proposed project would be expected to decrease the generation of solid waste in the proposed project area when compared to the waste that would be generated from buildout of the project area per the existing General Plan land use designations. In addition, the existing landfill would be expected to have adequate capacity to accommodate the waste associated with the proposed project. The Keller Canyon Landfill currently handles 2,500 tons of waste per day, although the permit allows up to 3,500 tons of waste per day to be managed at the facility.[20] Therefore, the project's impact to solid waste would be ***less than significant***.

[19] See Tables 32-34 in 2010 Urban Water Management Plan, City of Brentwood, May 2011, pp. 6-12 and 6-13.
[20] Allied Waste. *Keller Canyon Landfill*. Available at: http://alliedwasteservicesofcontracostacounty.com/disposal_sites_kellercanyon.cfm. Accessed February 2014.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	✖	☐
b.	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	✖	☐
c.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	✖	☐

Discussion

a,b. Development that converts rural areas to urban/suburban uses may be regarded as achieving short-term goals to the disadvantage of long-term environmental goals. However, the inevitable impacts resulting from population and economic growth are mitigated by long-range planning to establish policies, programs, and measures for the efficient and economical use of resources. Long-term environmental goals, both broad and specific, have been addressed previously in several environmental documents, the most comprehensive being the General Plan Final EIR certified in 1993, and the General Plan Update EIR certified in 2001. Therefore, the impact is ***less-than-significant.***

c. The loss of prime agricultural land is considered a “cumulatively considerable impact” and a “substantial adverse impact,” both direct and indirect. However, this Initial Study includes mitigation in order to reduce the impacts of the proposed project on Prime Farmland conversion. Other cumulative impacts associated with the proposed project may be identified in the categories of demand for services and physical changes to the natural environment. These impacts would be considered *potentially significant*. However, the incremental contribution of the project to these impacts would be mitigated through mitigation measures included herein, thereby resulting in a ***less-than-significant*** impact for the proposed project.