INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

FOR THE

BRENTWOOD ORCHARD GROVE SUBDIVISION

MARCH 2022

Prepared for:

City of Brentwood – City Hall
150 City Park Way
Brentwood, CA 94513
(925) 516-5400

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 949-3231

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

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Proposed Mitigated Negative Declaration for the Brentwood Orchard Grove Subdivision

Lead Agency:
City of Brentwood – City Hall
150 City Park Way
Brentwood, CA 94513

Project Title: Brentwood Orchard Grove Subdivision

Project Location: The Brentwood project site (project site) includes approximately 16.82 located in the northern portion of the City of Brentwood. The site is identified by Assessor's Parcel Numbers (APN) 016-040-005. The project site is bounded by vacant land to the north, Adams Lane to the west, single family residential to the south, and to the east. The Brentwood General Plan designates lands adjacent to the project site as Residential Very Low Density (R-VLD) and Ranchette Estate (RE) to the south, Residential Very Low Density (R-VLD) to the east, and School (SCH) to the west of the project site. Current uses within these areas include the Marsh Creek Elementary School and Blue Goose Park to the west vacant land to the north, and single family residential to the east and south.

Project Description: The proposed project consists of the subdivision of a 16.82-acre site into 51 single-family residential parcels and one onsite bioretention parcel. The proposal results in a density of 3.03 units per gross acre, which would be above the defined General Plan R-VLD density of 1.1 to 3.0 units per gross acre. However, in accordance with the Government Code Section 65915(d), the project is entitled to a 5% density bonus and up to 53 units. The proposed project is requesting a Density Bonus of two percent (2%) to increase the base 50 unit project by one unit to a 51 unit project. To comply with Density Bonus law and the City's density bonus ordinance, the project is required to provide 6 of the 51 units as affordable units. The majority of lots on site would range between 8,000 sf and 9,000 sf in size. However, the project would include seven larger lots ranging between 20,027 sf and 26,539 sf along the southern and eastern edge of the site, north of Gracie Lane and west of Lone Oak Road. To assure an appropriate density transition between the proposed project and the existing ranchette homes to the south, the larger lots would back up to Gracie Lane along the southern boundary of the site, in accordance with the General Plan (Goal LU 2, Action LU 2a). This configuration would provide a visual buffer to minimize the impact of the development on the existing residents and protect the integrity of the existing land use patterns to the south.

There are no trees currently on the project site that would be removed as part of the project. The project site would be re-landscaped with trees, shrubbery, grass and other common landscaping vegetation.

Access to the site would be via two proposed access locations off Adams Lane which borders the property to the west and will create a new looped public street internal to the project. Pursuant to the requirements of the City's engineering department, Adams Lane will be widened along the project frontage to accommodate through traffic and new turning motions into and out of the proposed project, and a cul-de-sac or hammer head will be provided at the terminus of Gracie Lane.

The proposed project would involve the construction of the necessary infrastructure to serve the proposed neighborhood and would include plans to connect to existing City infrastructure to provide water and sewer, to the site. The project includes installation of 8-inch water and sanitary sewer lines and 18-inch storm drain lines within the internal street rights-of-way (ROW). Storm water quality for the site will be achieved with a bioretention basin constructed at or near the southeast corner of the site. Storm drainage is proposed to then be conveyed through a new 24-inch storm drain pipe and new outfall on Marsh Creek. The drain pipe will be installed in an existing public easement containing a sanitary sewer line. That easement will be expanded to accommodate the proposed storm drain and outfall. Storm drainage would be conveyed to the bioretention area and discharged to the City's storm drainage system.

The proposed outfall into Marsh Creek would be constructed pursuant to Contra Costa County's Standard Plans CD40 and CD50 and approximately 0.003+/- acres of jurisdictional Waters of the U.S. in the Marsh Creek channel will be filled to construct the outfall. Various storm drainage supporting structures would be located throughout the project site directing the storm drainage flows into the bioretention area and storm drain inlets.

Findings:

In accordance with the California Environmental Quality Act, the City of Brentwood has prepared an Initial Study to determine whether the proposed project may have a significant adverse effect on the environment. The Initial Study and Proposed Mitigated Negative Declaration reflect the independent judgment of City of Brentwood staff. On the basis of the Initial Study, the City of Brentwood hereby finds:

> *Although the proposed project could have a significant adverse effect on the environment, there will not be a significant adverse effect in this case because the project has incorporated specific provisions to reduce impacts to a less than significant level and/or the mitigation measures described herein have been added to the project. A Mitigated Negative Declaration has thus been prepared.*

The Initial Study, which provides the basis and reasons for this determination, is attached and/or referenced herein and is hereby made a part of this document.

Crystal De Castro — April 1, 2022

Signature — Date

Proposed Mitigation Measures:

The following Mitigation Measures are extracted from the Initial Study. These measures are designed to avoid or minimize potentially significant impacts, and thereby reduce them to an insignificant level. A Mitigation Monitoring and Reporting Program (MMRP) is an integral part of project implementation to ensure that mitigation is properly implemented by the City and the implementing agencies. The MMRP will describe actions required to implement the appropriate mitigation for each CEQA category including identifying the responsible agency, program timing, and program monitoring requirements. Based on the analysis and conclusions of the Initial Study, the impacts of proposed project would be mitigated to less-than-significant levels with the implementation of the mitigation measures presented below.

AESTHETICS

Mitigation Measure AES-1*: In conjunction with development of the proposed project, the developer shall shield all on-site lighting so that nighttime lighting 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 and the Public Works Department in conjunction with the project improvement plans. The lighting plan shall indicate the locations and design of the shielded light fixtures.*

AGRICULTURAL RESOURCES

Mitigation Measure AG-1: *Pursuant to City of Brentwood Municipal Section 17.730.030, the Project applicant must preserve agricultural lands by 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.*

AIR QUALITY

Mitigation Measure AIR-1*: Prior to the issuance of a grading permit, the Applicant/Developer shall prepare an Erosion Prevention and Dust Control Plan. The plan shall be followed by the project's grading contractor and submitted to the Public Works Department, which will be responsible for field verification of the plan during construction.*

The plan shall comply with the City's grading ordinance and shall include the following control measures and other measures as determined by the Public Works Department to be necessary for the proposed project:

- *Cover all trucks hauling construction and demolition debris from the site;*
- *Water all exposed or disturbed soil surfaces at least twice daily;*
- *Use watering to control dust generation during demolition of structures or break-up of pavement;*
- *Pave, apply water three time daily, or apply (non-toxic) soil stabilizers on all unpaved parking areas and staging areas;*
- *Sweep daily (with water sweepers) all paved parking areas and staging areas;*
- *Provide daily clean-up of mud and dirt carried onto paved streets from the site;*
- *Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.);*
- *Limit traffic speeds on unpaved roads to 15 mph;*
- *Install sandbags or other erosion control measures to prevent silt runoff to public roadways;*
- *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;*
- *Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) or construction areas;*
- *Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph;*
- *Limit the area subject to excavation, grading, and other construction activity at any one time;*
- *Unnecessary idling of construction equipment shall be avoided;*
- *Equipment engines shall be maintained in proper working condition per manufacturers' specifications;*
- *During periods of heavier air pollution (May to October), the construction period shall be lengthened to minimize the amount of equipment operating at one time;*
- *Where feasible, the construction equipment shall use cleaner fuels, add-on control devices and conversion to cleaner engines.*

Mitigation Measure AIR-2: *During periods of high dust in the grading phase, crews must use National Institute for Occupational Safety and Health (NIOSH) approved N95 masks or better or other more stringent measures in accordance with the California Division of Occupational Safety and Health regulations.*

Mitigation Measure AIR-3: *The operator cab of area grading and construction equipment must be enclosed and air-conditioned.*

BIOLOGICAL RESOURCES

Mitigation Measure BIO-1*: Prior to any ground disturbance related to activities covered under the ECCCHCP, the project applicant will need to comply with the required species-specific avoidance and minimization requirements for Western Burrowing Owl, Swainson's Hawk, California Red-Legged Frog, and Golden Eagle, as outlined in Section IV.2, Required Preconstruction Surveys, Avoidance and Minimization, and Construction Monitoring, of the project's Planning Survey Report (see Appendix B of this Initial Study).*

Mitigation Measure BIO-2: *Prior to the issuance of grading or construction permits for the project site, the developer shall submit an application and obtain coverage under the ECCCHCP. This will include payment of the applicable ECCCHCP per-acre fee in effect for Zone I in compliance with Section 16.168.070 of the Brentwood Municipal Code. The developer shall receive a Certificate of Coverage from the City of Brentwood and submit a construction monitoring report to the ECCC Habitat Conservancy for review and approval. The Certificate of Coverage will confirm the fee has been received, that other ECCC HCP/NCCP requirements have been met or will be performed, and will authorize take of covered species.*

CULTURAL RESOURCES

Mitigation Measure CUL-1: *Prior to grading permit issuance, the developer shall submit plans to the Community Development Department for review and approval which indicate (via notation on the improvement plans) that if historic and/or cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within 25 feet of the area of discovery and the developer shall immediately notify the Community Development Department of the discovery. In such case, the developer shall be required, at their own expense, to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the Community Development Department for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery would not be allowed until the preceding work has occurred.*

Mitigation Measure CUL-2: *Pursuant to State Health and Safety Code §7050.5 (c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the most likely descendant. The most likely descendant shall work with the contractor to develop a program for reinternment of the human remains and any associated artifacts. Additional work is not to take place within the immediate vicinity of the find until the identified appropriate actions have been implemented.*

GEOLOGY AND SOILS

Mitigation Measure GEO-1*: All project buildings shall be designed in conformance with the current edition of the California Building Code (CBC), as adopted and amended by the City of Brentwood.*

Mitigation Measure GEO-2: *Prior to final design approval and issuance of building permits for each phase of the project, the project applicant shall incorporate the recommendations included in the Geotechnical Exploration prepared by ENGEO (dated January 3, 2020) into the project design and specifications related to the following topics:*

- *Earthwork*
    - *General Site Clearing*
    - *Undocumented Fill Removal*
    - *Over-Optimum Soil Moisture Conditions*
    - *Acceptable Fill*
    - *Fill Compaction*
    - *Slopes*
    - *Site Drainage*
- *Foundation Design*
    - *Post-Tensioned Mat Foundations*

    - *Exterior Flatwork*
    - *Trench Backfill*
- *Soundwall and Retaining Walls*
    - *Lateral Soil Pressures*
    - *Wall Drainage*
    - *Backfill*
    - *Foundations*
- *Pavement Design*
    - *Flexible Pavements*
    - *Subgrade and Aggregate Base Compaction*

Mitigation Measure GEO-3: *All grading and foundation plans for the development shall be designed by a Civil and Structural Engineer and reviewed and approved by the Director of Public Works/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.*

Mitigation Measure GEO-4: *Prior to grading permit issuance, the applicant shall submit a final grading plan to the Director of Public Works/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 Director of Public Works/City Engineer.*

Mitigation Measure GEO-5: *Any applicant for a grading permit shall submit an erosion control plan to the Director of Public Works/City Engineer for review and approval. The 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.*

Mitigation Measure GEO-6: *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 Public Works Department prior to commencement of grading.*

Mitigation Measure GEO-7: *Should construction or grading activities result in the discovery of unique paleontological resources, all work within 100 feet of the discovery shall cease. The Community Development Director shall be notified, and the resources shall be examined by a qualified archaeologist, paleontologist, or historian, at the developer's expense, for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist, paleontologist, or historian shall submit to the Community Development Department for review and approval a report of the findings and method of curation or protection of the resources. Work may only resume in the area of discovery when the preceding work has occurred.*

HYDROLOGY AND WATER QUALITY

Mitigation Measure HYD-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 to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The contractor shall implement BMPs to reduce pollutants in stormwater discharges consistent with the requirements established in 15.52.60(F): Erosion and Sediment Control of the City's Municipal Code. 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.*

Mitigation Measure HYD-2: *Prior to the completion of construction, the applicant shall prepare and submit, for the City's review, an acceptable Stormwater Control Operation and Maintenance Plan. In addition, prior to the sale, transfer, or permanent occupancy of the site 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 accept the responsibility for maintenance of stormwater management facilities until such responsibility is transferred to another entity.*

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 Director of Public Works/City Engineer. Typical routine maintenance consists of the following:

- *Limit the use of fertilizers and/or pesticides. Mosquito larvicides shall be applied only when absolutely necessary.*
- *Replace and amend plants and soils as necessary to ensure the planters are effective and attractive. Plants must remain healthy and trimmed if overgrown. Soils must be maintained to efficiently filter the storm water.*

Mitigation Measure HYD-3*: Design of both the on-site drainage facilities shall meet with the approval of both the Director of Public Works/City Engineer and the Contra Costa County Flood Control and Water Conservation District prior to the issuance of grading permits.*

Mitigation Measure HYD-4*: Contra Costa County Flood Control and Water Conservation District drainage fees for the Drainage Area shall be paid prior to issuance of grading permits to the satisfaction of the Director of Public Works/City Engineer.*

Mitigation Measure HYD-5*: The Applicant/Developer shall ensure that the project site shall drain into a street, public drain, or approved private drain, in such a manner that un-drained depressions shall not occur. Satisfaction of this measure shall be subject to the approval of the Director of Public Works/City Engineer.*

Mitigation Measure HYD-6*: The construction plans shall indicate roof drains emptying into a pipe leading to the project bioswale areas for the review and approval of the Director of Public Works/City Engineer prior to the issuance of building permits.*

Mitigation Measure HYD-7*: The improvement plans shall indicate concentrated drainage flows not crossing sidewalks or driveways for the review and approval of the Director of Public Works/City Engineer prior to the issuance of grading permits.*

NOISE

Mitigation Measure NOI-1: *Prior to issuance of buildings permits for any residential unit, the construction drawings shall include a suitable form of forced-air mechanical ventilation for each unit, 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.*

Mitigation Measure NOI-2: *Prior to issuance of building permits, a qualified acoustical consultant shall review the final set of construction documents to calculate expected interior noise levels as required by the City of Brentwood to confirm that the design results in interior noise levels reduced to 45 dBA CNEL or lower. Results of the analysis, including the description of the necessary noise control treatments, shall be submitted to the City along with the building plans and approved prior to issuance of a building permit. Potential measures could include, but would not be limited to, incorporation of noise insulating building materials such as windows or exterior doors with STC ratings of up to STC 28. The exact window and door sound ratings would depend on the final design of the buildings including the size of windows/doors and composition of exterior walls.*

Mitigation Measure NOI-3: *Prior to approval of project improvement plans, the improvement plans for the proposed project shall show a perimeter wall in the locations shown in the project landscaping plans prepared by vanderToolen Associates (dated January 2022), per the approval of the City Engineer. Other types of barrier may be employed but shall be reviewed by an acoustical engineer prior to being constructed to ensure compliance with General Plan noise level requirements.*

Mitigation Measure NOI-4: *Construction activities shall be limited to the hours set forth below:*

Monday-Friday 7:00 AM to 6:00 PM
Saturday 8:00 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 applicant/developer for review and approval of the Community Development Director prior to issuance of grading permits. Exceptions to allow expanded construction activities shall be reviewed on a case-by-case basis as determined by the Chief Building Official and/or City Engineer.

Mitigation Measure NOI-5: *The project contractor shall ensure that the following construction noise BMPs are met on-site during all phases of construction:*

- *All equipment driven by internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specifications. Mobile or fixed "package" equipment (e.g., arc welders, air compressors) shall be equipped with shrouds and noise- control features that are readily available for that type of equipment.*
- *All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.*
- *The construction contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.*
- *At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from residences.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *Construction staging areas shall be established at locations that would create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction activities, to the extent feasible.*
- *Construction site and access road speed limits shall be established and enforced during the construction period.*
- *The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.*
- *Project-related public address or music systems shall not be audible at any adjacent receptor.*
- *Neighbors located adjacent to the construction site shall be notified of the construction schedule in writing.*
- *The construction contractor shall designate a "noise disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall be responsible for determining the cause of the noise complaint (e.g., starting too early, poor muffler, etc.) and instituting reasonable measures as warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.*

Construction noise BMPs 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.

PUBLIC SERVICES

Mitigation Measure PUB-1: *Prior to building permit issuance for any residential development, the developer shall submit to the Community Development Department proof that the appropriate school mitigation fees have been paid pursuant to Proposition 1A/SB 50.*

Mitigation Measure PUB-2: *Prior to building permit issuance, the project applicant shall pay the proportional required park in-lieu fees as determined by the Parks and Recreation Department and the Community Development*

Department, in accordance with the City's Development Fee Program and Brentwood Municipal Code Section 16.150.020.B.

TRIBAL CULTURAL RESOURCES

Mitigation Measure TRI-1 *If cultural resources are discovered during project-related construction activities, all ground disturbances within a minimum of 50 feet of the find shall be halted until a qualified professional archaeologist can evaluate the discovery. The archaeologist shall examine the resources, assess their significance, and recommend appropriate procedures to the lead agency to either further investigate or mitigate adverse impacts. If the find is determined by the lead agency in consultation with the Native American tribe traditionally and culturally affiliated with the geographic area of the project site to be a tribal cultural resource and the discovered archaeological resource cannot be avoided, then applicable mitigation measures for the resource shall be discussed with the geographically affiliated tribe. Applicable mitigation measures that also take into account the cultural values and meaning of the discovered tribal cultural resource, including confidentiality if requested by the tribe, shall be completed (e.g., preservation in place, data recovery program pursuant to PRC §21083.2[i]). During evaluation or mitigative treatment, ground disturbance and construction work could continue on other parts of the project site.*

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INITIAL STUDY

PROJECT TITLE

Brentwood Orchard Grove Subdivision Project

LEAD AGENCY NAME AND ADDRESS

City of Brentwood
150 City Park Way
Brentwood, CA 94513

CONTACT PERSON AND PHONE NUMBER

Crystal De Castro, Associate Planner
City of Brentwood
Community Development Department
(925) 516-5405

PROJECT SPONSOR'S NAME AND ADDRESS

Shea Homes, Limited Partnership
c/o David Best
2630 Center Drive
Livermore, CA 94551
(925) 245-3631

PURPOSE OF THE INITIAL STUDY

An Initial Study (IS) is a preliminary analysis, prepared pursuant to the California Environmental Quality Act (CEQA), to determine the potential environmental impacts associated with a proposed project. It is designed as a measuring mechanism to determine if a project may have a significant adverse effect on the environment, thereby triggering the need to prepare an Environmental Impact Report (EIR). It also functions as an evidentiary document containing information, which supports conclusions that the project will not have a significant environmental impact or that the impacts can be mitigated to a "Less Than Significant" or "No Impact" level. Under CEQA, if there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, the lead agency shall prepare a Negative Declaration (ND). If the IS identifies potentially significant effects, but: (1) revisions in the project plans or proposals would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and (2) there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment, then a Mitigated Negative Declaration (MND) shall be prepared.

This Initial Study has been prepared consistent with CEQA regulations (known as the "CEQA Guidelines") Section 15063, to determine if the proposed Orchard Grove Subdivision (project) may have a significant effect upon the environment. Based upon the findings and mitigation measures contained within this report, a Mitigated Negative Declaration (MND) will be prepared.

BACKGROUND

On July 22, 2014, the City of Brentwood City Council adopted a comprehensive General Plan Update, which was last updated in 1993 (a partial update involving the Growth Management, Land Use, and Circulation Elements was completed in 2001). An Environmental Impact Report (EIR) prepared for the General Plan Update, addressed the potential impacts associated with full build-out of the General Plan Land Use Diagram. The 2014 Brentwood General Plan Update EIR was certified by the Brentwood City Council on July 22, 2014. The General Plan Update Land Use Map designates the project site as Residential Very Low Density (R-VLD). Residential Very Low Density land uses are required to have a density of between 1.1 and 3.0 dwelling units per gross acre, with a mid-range of 2.0 units per gross acre. In accordance with Sections 15152, 15168 and 15183 of the CEQA Guidelines and Section 21083.3(b) of the Public Resources Code, this IS will tier from the previously certified EIR (SCH# 2014022058) prepared for the General Plan Update. The General Plan EIR is available for review on the City's website at https://www.brentwoodca.gov/gov/cd/planning/ceqa.asp. The zoning designation of the project site is Single Family Residential Estate (R-1-E).

PROJECT LOCATION AND SETTING

PROJECT LOCATION

The approximately 16.82-acre project site is located at 1801 Lone Oak Road directly north of the intersection of Lone Oak Road and Gracie Lane in the northeastern portion of Brentwood. The project site is generally bound by Adams Lane to the west, Gracie Lane to the south, Lone Oak Road to the east, and vacant land, The Rock Church, and two single-family residences to the north. The project site is identified by Contra Costa County as Assessor's Parcel Number (APN) 016-040-005. The project's location is shown in Figure 1.

EXISTING SITE USES

The project site is currently an undeveloped, open grassland field that previously contained agricultural uses. The project site appears to be periodically mowed and/or disked, consisting mostly of disturbed ruderal grassland vegetation. The site is currently vacant with no structures or trees present; however, signs indicating the presence of a natural gas pipeline exist near the northern boundary the site. According to the Phase I Environmental Site Assessment for the project site, a CalPine 3" natural gas pipeline ran west to east along the northern boundary of the project site, but was abandoned in 1988.

Figure 2 displays the aerial view of the project site and surrounding area.

SURROUNDING LAND USES

The General Plan designates lands adjacent to the project site as R-VLD and Semi-Public Facility (SPF) to the north, R-VLD to the east, Ranchette Estate (RE) to the south and southeast, and Park (P) and School (SCH) to the southwest and west across Adams Lane, respectively. Current uses within these areas include the Marsh Creek Elementary School and Blue Goose Park to the west, vacant land to the north, and single family residential to the east and south.

GENERAL PLAN DESIGNATIONS

The project site is currently designated Residential Very Low Density (R-VLD) by the City of Brentwood General Plan Land Use Map. The R-VLD designation accommodates fairly large lots for single family residences in an identifiable, suburban residential neighborhood, or cluster-style development designed with open space and other amenities. Neighborhoods with either development type will be part of the Brentwood urban area to be provided with urban public facilities and services. The permitted density range is 1.1 to 3.0 units per gross acre, with a midrange of 2.0 units per gross acre.

ZONING DESIGNATIONS

The project site is currently zoned (R-1-E) Single-Family Residential. As stated in Chapter 17.130 of the City's Municipal Code, the R-1-E zone allows for single family residential type uses with a minimum lot area of 14,500 square feet. The project applicant has requested a density bonus, in order to provide a variety of lot sizes on the project site.

PROJECT DESCRIPTION

The proposed project consists of the subdivision of a 16.82-acre site into 51 single-family residential parcels and one onsite bioretention parcel. The proposal results in a density of 3.03 units per gross acre, which would be above the defined General Plan R-VLD density of 1.1 to 3.0 units per gross acre. However, in accordance with the Government Code Section 65915(d), the project is entitled to a 5% density bonus and up to 53 units. The proposed project is requesting a Density Bonus of two percent (2%) to increase the base 50 unit project by one unit to a 51 unit project. To comply with Density Bonus law and the City's density bonus ordinance, the project is required to provide 6 of the 51 units as affordable units. The majority of lots on site would range between 8,000 sf and 9,000 sf in size. However, the project would include eight larger lots ranging between 20,027 sf and 26,539 sf along the southern and eastern edge of the site, north of Gracie Lane and west of Lone Oak Road. To assure an appropriate density transition between the proposed project and the existing ranchette homes to the south, the larger lots would back up to Gracie Lane along the southern boundary of the site, in accordance with the General Plan (Goal LU 2, Action LU 2a). This configuration would provide a visual buffer to minimize the impact of the development on the existing residents and protect the integrity of the existing land use patterns to the south.

Access to the site would be via two proposed access locations off Adams Lane which borders the property to the west and will create a new looped public street internal to the project. Pursuant to the requirements of the City's engineering department, Adams Lane will be widened along the project frontage to accommodate through traffic and new turning motions into and out of the proposed project, and a cul-de-sac or hammer head will be provided at the terminus of Gracie Lane. The proposed site plan layout is shown in Figure 3.

The proposed project would involve the construction of the necessary infrastructure to serve the proposed neighborhood and would include plans to connect to existing City infrastructure to provide water and sewer, to the site. The project includes installation of 8-inch water and sanitary sewer lines and 18-inch storm drain lines within the internal street rights-of-way (ROW). Storm

water quality for the site will be achieved with a bioretention basin constructed at or near the southeast corner of the site. Storm drainage is proposed to then be conveyed through a new 24-inch storm drain pipe and new outfall on Marsh Creek. The drain pipe will be installed in an existing public easement containing a sanitary sewer line. That easement will be expanded to accommodate the proposed storm drain and outfall. Storm drainage would be conveyed to the bioretention area and discharged to the City's storm drainage system.

The proposed outfall into Marsh Creek would be constructed pursuant to Contra Costa County's Standard Plans CD40 and CD50 and approximately 0.003+/- acres of jurisdictional Waters of the U.S. in the Marsh Creek channel will be filled to construct the outfall. Various storm drainage supporting structures would be located throughout the project site directing the storm drainage flows into the bioretention area and storm drain inlets. The proposed Utility Plan is shown on Figure 4.

DENSITY BONUS

The proposed project requests a Density Bonus pursuant to the City's Density Bonus program, Chapter 17.720 Brentwood Municipal Code, and state law. To satisfy the affordable housing requirements, the proposed project will provide six affordable duet units, each on lots that are at a minimum of 40' wide by 60' deep in size. In total there is proposed to be 51 homes in the project over 16.82 acres which calculates to 3.03 units per acre and is consistent with the currently designated General Plan R-VLD maximum density, plus 5% density bonus as prescribed by law and ordinance. At 3 units/acre, the property can develop 50.46 units. Density Bonus law rounds up all fractional units to the next whole number which results in a base project of 50 units. The proposed Density Bonus Project would be eligible for a density bonus of up to 5% of the base number of units, concessions and waivers of otherwise applicable development standards and regulations, and reduced parking ratios, all in accordance with the State Density Bonus statute (Government Code section 65915).

Requested Waivers

The proposed project is requesting the following waivers of development standards that would otherwise physically preclude construction of the proposed density bonus project:

a) Minimum lot sizes for the market rate units shall be reduced to 8,000sqft from 10,000sqft+

b) Minimum lot sizes for the affordable units shall be reduced to 3,750 square feet

c) Minimum lot dimensions for the market rate units shall be 80 feet wide as measured at the rear lot line, and 100 feet deep

d) Minimum lot dimensions for duet units shall be 40' wide as measured at the rear lot line, by 75' deep.

e) Minimum front yard setbacks shall be 20' to garage and 15' to living space

f) Minimum side yard setback shall be 7' with a 20' aggregate on the market rate units

g) Minimum side yard setbacks shall be 10' minimum on one side and zero on the lot line defining the common wall between duets.

h) Minimum rear yard setback shall be 15'.

i) General Plan Transition Policy (LU-2a) requiring a minimum 20,000 square foot lot sizes shall not apply on the northern edge of the proposed development.

Requested Concessions

The proposed project is requesting the following concession:

a) Waiver of the public benefit requirement for projects exceeding the mid-range density.

Reduced Parking Ratios

The applicant is not requesting the reduction of any parking standards, requirements, or city parking policies.

REQUESTED ENTITLEMENTS AND OTHER APPROVALS

The City of Brentwood is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of the California Environmental Quality Act (CEQA), Section 15050.

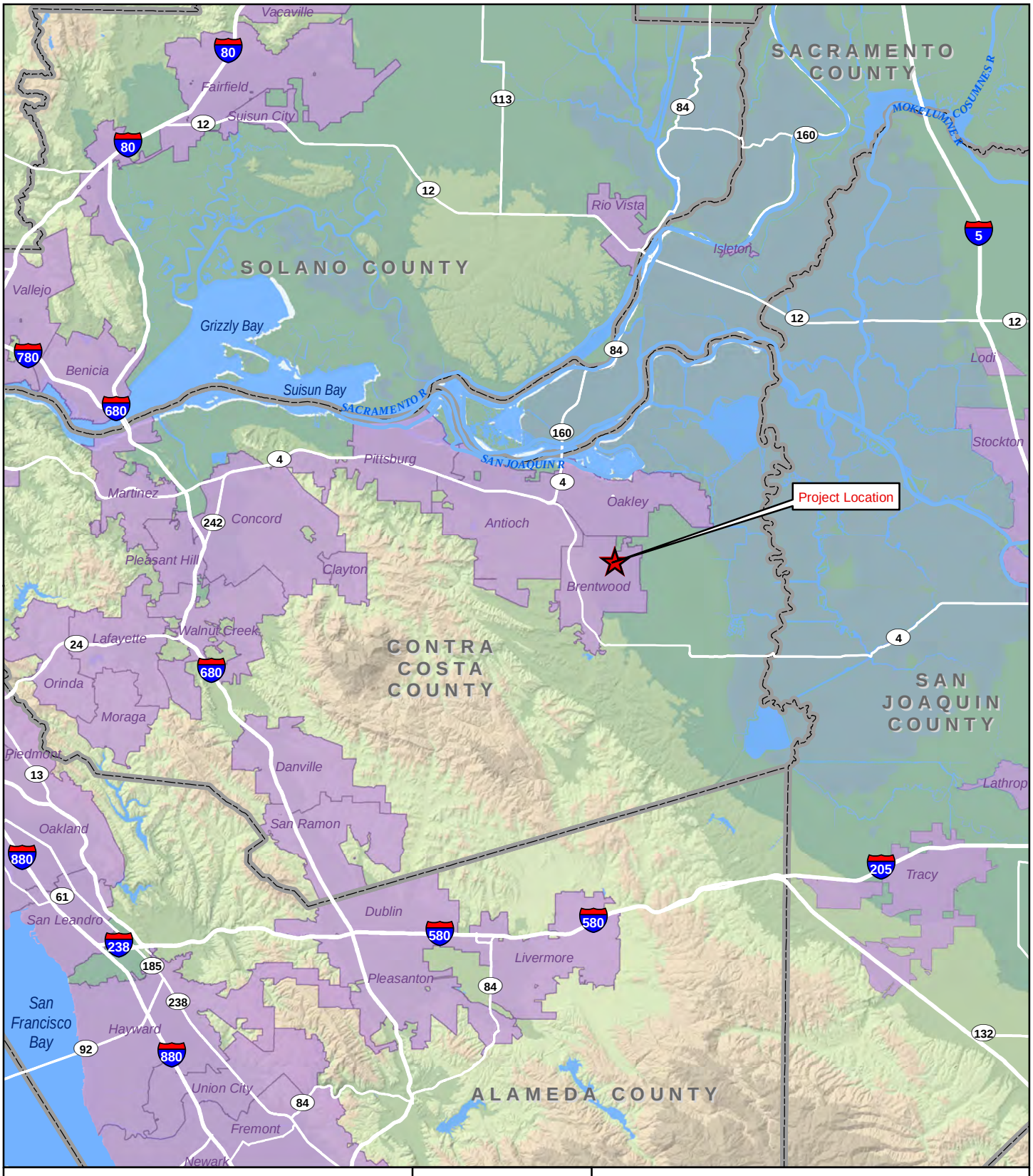
The applicant is requesting the following:

- Adoption of the Mitigated Negative Declaration (MND) and adoption of the Mitigation Monitoring and Reporting Program (MMRP)
- Approval of a Density Bonus to allow 3.03 units per acre density within the Residential Very Low Density (R-VLD) land use designation.
- Approval of Tentative Subdivision Map 9535 to subdivide approximately 16.82 acres into 51 single-family detached residential parcels and one bioretention parcel.
- Approval of an encroachment permit to construct offsite improvements to widen Adams Lane.
- Design Review of the proposed residential structures.

The following agencies may be required to issue permits or approve certain aspects of the proposed project:

- Central Valley Regional Water Quality Control Board (CVRWQCB) - clearance for the proposed storm drain outfall to Marsh Creek.
- Bay Area Air Quality Management District (BAAQMD) - Approval of construction-related air quality permits.

- East Contra Costa County Habitat Conservancy (ECCCHP) - Review of project application to determine consistency with the East Contra Costa County Habitat Conservation Plan and Natural Community Conservation Plan (ECCCHCP/NCCP).
- US Army Corps of Engineers permit for the proposed storm drain outfall to Marsh Creek.
- California Department of Fish and Wildlife streambed alteration permit for the proposed storm drain outfall to Marsh Creek.
- Encroachment permit from Contra Costa County Flood Control District for the construction of the proposed outfall structure in Marsh Creek.



Legend

- Project Location
- County Boundary
- City Area

Sources: CalAtlas; San Joaquin, Stanislaus, Sacramento, Solano, Contra Costa, and Alameda Counties. Map date: August 5, 2020.

N

0 2½ 5
Miles

ORCHARD GROVE SUBDIVISION BRENTWOOD, CALIFORNIA

Figure 1. Project Vicinity Map

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Legend

- Project Boundary
- Offsite Improvements

N

0 200 400
Feet

Sources: Contra Costa County; Google Maps; Moore Biological Consultants; ArcGIS Online World Imagery Map Service. Map date: October 5, 2020.

ORCHARD GROVE SUBDIVISION BRENTWOOD, CALIFORNIA

Figure 2. Aerial View of Project Site

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Legend

Assessor Parcel 016-040-005

0 50 100
Feet

ORCHARD GROVE SUBDIVISION
BRENTWOOD, CALIFORNIA

Figure 3. Site Plan

Sources: Contra Costa County; CBG Civil Engineers, February 2022. Map date: March 7, 2022.

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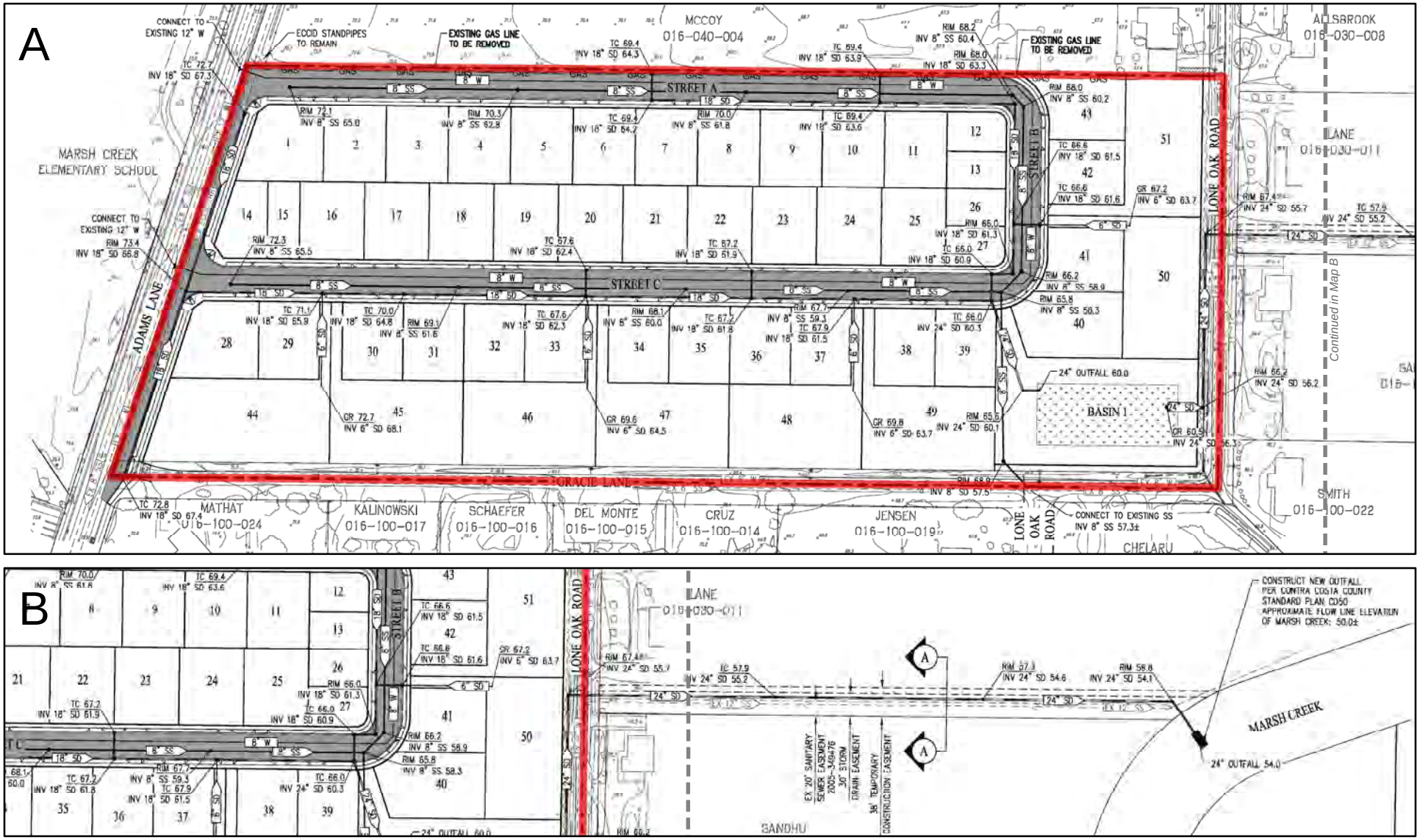

Legend

- Assessor Parcel 016-040-005
- Matchline

0 50 100 Feet

ORCHARD GROVE SUBDIVISION
BRENTWOOD, CALIFORNIA

Figure 4. Utility Plan

Sources: Contra Costa County; CBG Civil Engineers, February 2022. Map date: March 7, 2022.

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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/Soils
	Greenhouse Gasses		Hazards and Hazardous Materials		Hydrology/Water Quality
	Land Use/Planning		Mineral Resources		Noise
	Population/Housing		Public Services		Recreation
	Transportation/Traffic		Utilities/Service Systems		Mandatory Findings of Significance

DETERMINATION:

On the basis of this initial evaluation:

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

Signature Date

EVALUATION INSTRUCTIONS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA provisions and processes, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a) Earlier Analysis Used. Identify and state where the analyses are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a

previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) The significance criteria or threshold, if any, used to evaluate each question; and
   b) The mitigation measure identified, if any, to reduce the impact to less than significance

EVALUATION OF ENVIRONMENTAL IMPACTS:

In each area of potential impact listed in this section, there are one or more questions which assess the degree of potential environmental effect. A response is provided to each question using one of the four impact evaluation criteria described below. A discussion of the response is also included.

- Potentially Significant Impact. This response is appropriate when there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries, upon completion of the Initial Study, an EIR is required.
- Less than Significant With Mitigation Incorporated. This response applies when the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- Less than Significant Impact. A less than significant impact is one which is deemed to have little or no adverse effect on the environment. Mitigation measures are, therefore, not necessary, although they may be recommended to further reduce a minor impact.
- No Impact. These issues were either identified as having no impact on the environment, or they are not relevant to the Project.

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ENVIRONMENTAL CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form, contained in the CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the 18 environmental topic areas.

I. AESTHETICS -- WOULD THE PROJECT:

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		X		

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. The City of Brentwood is located in the eastern valley area of Contra Costa County, immediately east of the Diablo Range, which includes Mount Diablo. The City of Brentwood has recognized views of Mount Diablo as an important visual resource to be preserved (see Policy COS 7-3 of the Conservation and Open Space Element of the Brentwood General Plan).

According to the 2014 Brentwood General Plan Update EIR and the California Scenic Highway Mapping System, administered by Caltrans, the City of Brentwood does not contain officially designated State Scenic Highways[1]. However, it should be noted that the segment of State Route 4 (SR 4) located approximately 2 miles to the west of the project site is listed as an Eligible State Scenic Highway, but has not yet been officially designated. The project would not damage any scenic resources, such as trees, rock outcroppings, or historic buildings, within a State Scenic Highway, and is not a visible feature from the SR 4 corridor. Additionally, the project site is not designated as a scenic vista. The 2014 Brentwood General Plan Update EIR identifies SR 4 as a local scenic route due to the distant panoramic vistas of the Diablo Range and Mount Diablo in particular. Mount Diablo is located to the west of SR 4 and the proposed project is located to the

[1] City of Brentwood. *2014 Brentwood General Plan Update EIR* [pg. 3.1-5]. July 22, 2014.

east of SR 4, and close to the northern edge of the city. As a result, the project structures would not impede views of Mount Diablo currently afforded to travelers along SR 4, or impede views of Mount Diablo from residents residing in the City of Brentwood.

The proposed project would not remove trees, rock outcroppings, and historic buildings within a state scenic highway, and is not designated as a scenic vista. Therefore, this is considered a **less than significant** impact.

Response c): Less than Significant. While the project site is current vacant, it is located within an urbanized area. The development of the site would change the existing visual setting from vacant land, to a suburban-scale residential setting consisting of 51 single family residential units. To assure an appropriate density transition between the proposed project and the existing ranchette homes to the south and east, the project proposes lots that back to Gracie and Lone Oak to be a minimum of 20,000 square feet. Additionally, the project includes a 0.9-acre bio retention parcel (Parcel A) in the southeast corner of the project site to provide additional buffering between the proposed project and the existing ranchette homes. This configuration will provide a visual buffer to the reduce impacts of the development on the existing residents and protect the integrity of the surrounding land use patterns. In addition, the proposed project is consistent with (R-VLD) land uses identified in the City's General Plan and General Plan Land Use Map. Implementation of the proposed project would alter the visual appearance on the project site through the removal of a limited number of trees and subsequent housing development. The proposed project is identified for urban land uses in the Brentwood General Plan. The proposed project is consistent with the overriding considerations that were adopted for the General Plan. As such, implementation of the proposed project would not create new impacts over and above those identified in the General Plan Final EIR nor significantly change previously identified impacts.

The final project design would be approved by the City through its design review process. Through this process the Planning Commission would ensure the design meets the criteria set forth in Municipal Code Section 17.820.007. As a result, development of the project site would result in a **less than significant** impact with respect to substantially degrading the existing visual character or quality of the site and its surroundings.

Response d): Less than Significant with Mitigation. The project site is void of structures and permanent light sources. As a result, no light or glare is currently emitted from the project site. The change from a vacant property to a residential development including 51 single family residences and associated street lighting would generate new permanent sources of light and glare. The project site is adjacent to single family residences to the east and south, and a school to the west. The structures 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. However, the project would not include reflective building materials, and vehicle headlight glare would not be exacerbated given the existing level of traffic on Adams Lane, and landscaping and fencing that would contain project vehicle light sources. However, street and safety lighting located along the project streets may be visible from surrounding locations. Therefore, the increase in light produced by the proposed project would be considered potentially significant.

Implementation of Mitigation Measure AES-1 would reduce the potential impacts related to light and glare to **less than significant**.

Mitigation Measure(s)

Mitigation Measure AES-1*: In conjunction with development of the proposed project, the developer shall shield all on-site lighting so that nighttime lighting 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 and the Public Works Department in conjunction with the project improvement plans. The lighting plan shall indicate the locations and design of the shielded light fixtures.*

II. AGRICULTURE AND FOREST RESOURCES: WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?		X		
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), or timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production as defined by Government Code section 51104(g)?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a): Less than Significant with Mitigation. The 16.82-acre development plan area contained past agricultural operations that have since ceased.

Figure 3.2-1 of the City of Brentwood General Plan EIR identifies the project site, as mapped by the USDA, as "Prime Farmland." Prime Farmland is defined by the California Department of Conservation Farmland Mapping and Monitoring Program as: *"land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. It has the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks."* Additionally, the soils within the project site are Capay Clay (0 to 2 percent slopes) and Rincon Clay Loam (0 to 2 percent). According to the "Summary by Map Unit" included in the Contra Costa County Soil Survey, the Capay Clay and Rincon Clay Loam are Class II soils and considered prime farmland if irrigated as defined by the United States Department of Agriculture

Natural Resource Conservation Service (USDA NRSC)[2]. Class II soils are typically irrigated to farm sugar beets, tomatoes, head lettuce, almonds, walnuts, apricots, and barley.

Section 17.730.020 of the City of Brentwood's Agricultural Preservation Program states that, "agricultural land" requiring mitigation, includes: "*those land areas of Contra Costa County specifically designated as agricultural core (AC) or agricultural lands (AL) as defined in the Contra Costa County general plan; those land areas near the city designated as agricultural conservation (AC) as defined in the Brentwood general plan; and/or other lands upon which agricultural activities, uses, operations or facilities exist or could exist that contain Class I, II, III or IV soils as defined by the United States Department of Agriculture Natural Resource Conservation Service*."

Removal of the site's prime farmland soil for agricultural use was addressed as a potentially significant effect in the City of Brentwood General Plan and General Plan EIR, and there is no new information known to the City showing that such effect from this project will be more significant than described in the General Plan EIR. The General Plan EIR states that Brentwood Municipal Code Section 17.730.030 includes the City's Agricultural Land Mitigation Requirements to mitigate and offset the loss of valuable farmland resources. Specifically, this Municipal Code Section requires agricultural land mitigation measures be applied to subdivision projects and/or any other discretionary land use entitlement that will permanently change agricultural land over one acre in size within the City's jurisdiction to a non-agricultural use. To this end, appropriate agricultural land mitigation measures noted in the General Plan EIR will be implemented with this project (see Mitigation Measure AG-1). Therefore, no further analysis of this potential effect is necessary.

As noted above, the site contains Class II and Prime Agricultural soils, as defined by the USDA NRSC. The proposed project is therefore subject to compliance with Chapter 17.730, Agricultural Preservation Program, of the Brentwood Municipal Code. Implementation of the following mitigation measure would bring the proposed project in compliance with Chapter 17.730 of the Brentwood Municipal Code. Thus, through implementation of Mitigation Measure AG-1, impacts related to this environmental topic are considered **less than significant**.

Mitigation Measure(s)

Mitigation Measure AG-1*: Pursuant to City of Brentwood Municipal Section 17.730.030, the Project applicant must preserve agricultural lands by 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.*

Response b): No Impact. The project site is not under Williamson Act contract, nor is the site zoned for agricultural use. The current land use designation for the project site is Residential Very Low Density. Therefore, the project would have no impact with respect to conflicting with agricultural zoning or Williamson Act contracts**.** There is **no impact.**

[2] USDA NRSC. *Soil Data Access Prime and other Important Farmlands*. Accessed August 19, 2020. URL: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1338623.html

Responses c) and d): No Impact. 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. Therefore, there is **no impact**.

Responses e): Less than Significant. Individual project impacts relating to the loss of prime farmland are addressed through the required mitigation in item a) above (Mitigation Measure AG-1). The proposed project would not be anticipated to promote off-site development of existing agricultural land because the proposed infrastructure is sized to serve only the project area. As stated previously, the project site is also surrounded by urban residential development to the south and east, and bordered on the west by Adams Lane. Overall, the potential effects from the conversion of Farmlands and forest lands to non-agricultural and non-forest uses throughout the City were addressed as potentially significant effects in the General Plan EIR, and there is no new information known to the City showing that such effects from this project will be more significant than described in the General Plan EIR. As previously mentioned, the General Plan EIR's mitigation measures applicable to these effects will be implemented with this project (see Mitigation Measure AG-1). Therefore, no further analysis of these potential effects is necessary. The proposed project would result in a **less than significant** impact to the existing environment that could individually or cumulatively result in loss of farmland to non-agricultural uses or conversion of forest land to non-forest uses.

III. AIR QUALITY -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) 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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?		X		
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

EXISTING SETTING

The project site is located within the boundaries of the Bay Area Air Quality Management District (BAAQMD). This agency is responsible for monitoring air pollution levels and ensuring compliance with federal and state air quality regulations within the San Francisco Bay Area Air Basin (SFBAAB) and has jurisdiction over most air quality matters within its borders.

RESPONSES TO CHECKLIST QUESTIONS

Response a): No Impact. 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. The most recent State ozone plan is the 2017 Clean Air Plan (CAP), adopted on April 19, 2017. The 2017 CAP was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). 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 and 2017 CAP are expected to also reduce PM_{10} emissions. In addition, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 CAP. The control strategy serves as the backbone of the BAAQMD's current PM control program. 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). The growth assumptions are based on ABAG projections that are, in turn, based on the City's General Plan. The proposed project site was designated for Residential Very Low Density uses in the Brentwood General Plan in effect at the time ABAG projections were forecast. The proposed project is consistent with the General Plan land use designation; therefore, the project would be considered consistent with the growth assumptions of the applicable air quality plans. As a result, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans. There is **no impact** relative to this topic.

Responses b): Less than Significant. Air pollutant emissions related to the proposed project would include both construction phase emissions and, upon project buildout, operational emissions (such as from vehicle trips generated by the proposed project). Construction phase emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from clearing and grading activities, wind-borne dust generated from exposed soils, and off-gassing from asphalt paving and painting. Construction-related emissions can vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content. Operational air pollutant emissions of the proposed project would be generated by electricity use for the night lighting at the project site, and visitor vehicle exhaust. Both construction and operation of the proposed project would result in the generation of emissions of carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NOx), and particulate matter (PM_{10}). Emissions of ROG and NOx are referred to as "precursors" to ozone formation. These two pollutants, when released into the atmosphere, undergo photochemical reactions in the presence of sunlight to form ozone. These ozone-forming photochemical reactions do not occur as readily in the cooler months of the year, and therefore, emissions of ROG and NOx are of greatest concern during the warmer months of summer.

According to the 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 (NOx), 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 Average Daily Emissions (lbs/day)	Operational Average Daily Emissions (lbs/day)	Cumulative Maximum Annual Emissions (tons/year)
ROG	54	54	10
NOx	54	54	10
PM_{10}	82	82	15
$PM_{2.5}$	54	54	10

Source: BAAQMD, CEQA Guidelines, May 2017.

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 the screening criteria are exceeded by a project, a detailed air quality assessment of that project's air pollutant emissions would be required. The project is made up of single-family residences. 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) (addressed in Section VIII); 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.

Per CEQA Guidelines Section 15064.7, the City has elected to use the BAAQMD's thresholds of significance and methodology for assessing the significance of impacts relating to criteria pollutants 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 51 dwelling units, the project does not exceed the screening criteria for operational or construction-related criteria pollutants resulting from a single-family residential development. As such, the proposed project would not be expected to result in potentially significant operational or construction-related air quality impacts.

As discussed previously, the proposed project falls under the screening criteria for operational and construction criteria air pollutants and precursors. BAAQMD has determined that if the project meets the screening criteria, the project would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the Thresholds of Significance. Therefore, implementation of the proposed project would result in a **less-than-significant** impact to air quality from criteria air pollutant and precursor 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.

Response c): Less than Significant with Mitigation. 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;
- Increases in traffic volumes at intersections to more than 44,000 vehicles per hour; or
- Increases in traffic volumes at intersections to more than 24,000 vehicles per hour due to project-generated traffic 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.

A General Plan amendment is not required for the proposed project. The proposed density is consistent with the General Plan designation for the site. As such, the project would be considered consistent with the growth assumptions of the General Plan. Subsequently, the project would result in similar mobile source emissions as currently anticipated for the site. In addition, none of the affected intersections currently experience traffic volumes of 44,000 vehicles per hour (or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited), and the project would not increase traffic volumes to greater than 44,000 vehicles per hour at any affected intersections (or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited). 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, the occupants of which would be considered sensitive receptors. Additionally, surrounding single family residences located just south and east of the project site would also be considered sensitive receptors, as well as Marsh Creek Elementary School to the northwest and Blue Goose Park to the southwest. 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 nearest freeway, SR 4, is located over 8,900 feet to the west of the project site. Therefore, 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 roadways.

The project does not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. Relatively few vehicle trips associated with operations of the proposed use would be expected to be composed of diesel-fueled vehicles. Therefore, the project would not generate any substantial concentrations of TACs during operations. Construction activities have the potential to generate DPM emissions related to the number and types of equipment typically associated with construction. Off-road heavy- duty diesel equipment used for site grading, paving, and other construction activities result in the generation of DPM. The residences located north and west of the project site would be considered the nearest existing sensitive receptor to the project site and could become exposed to DPM emissions from the site during construction activities. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. In addition, only portions of the site would be disturbed at a time during buildout of the proposed project, with operation of construction equipment regulated and occurring intermittently throughout the course of a day. Thus, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be very low. Because health risks associated with exposure to DPM or any TAC are correlated with high concentrations over a long period of exposure (e.g., over a 70-year lifetime), the temporary, intermittent construction-

related DPM emissions would not be expected to cause any health risks to nearby sensitive receptors. Thus, construction of the proposed project would not expose any nearby existing sensitive receptors to any short-term substantial concentrations of TACs.

Valley Fever is an infection caused by inhalation of the spores of the *Coccidioides immitis fungus*, which grows in soils and are released during earthmoving. The ecological factors that appear to be most conducive to survival and replication of the spores are high summer temperature, mild winters, sparse rainfall, and alkaline, sandy soils. Given that the project site has been in active cultivation and the immediate vicinity consists of urbanized development, the project site is in an area that would lead to a low probability of having C. immitis growth sites and exposure from disturbed soil. Nonetheless, construction activities would generate fugitive dust that has some risk of containing C. immitis spores. Without adequate dust management, implementation of the project may result in human health impacts due to exposure to fungus spores which cause Valley Fever. The project will minimize the generation of fugitive dust during construction activities by complying with the dust management BMP's set forth in Mitigation Measure AIR-1.

In conclusion, with the implementation of the following mitigations measures the proposed project would not expose sensitive receptors to substantial concentrations of any TACs or fungus spores which cause Valley Fever after mitigation. Therefore, impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be considered **less than significant with mitigation**.

Mitigation Measure(s)

Mitigation Measure AIR-1*: Prior to the issuance of a grading permit, the Applicant/Developer shall prepare an Erosion Prevention and Dust Control Plan. The plan shall be followed by the project's grading contractor and submitted to the Public Works Department, which will be responsible for field verification of the plan during construction.*

The plan shall comply with the City's grading ordinance and shall include the following control measures and other measures as determined by the Public Works Department to be necessary for the proposed project:

- *Cover all trucks hauling construction and demolition debris from the site;*
- *Water all exposed or disturbed soil surfaces at least twice daily;*
- *Use watering to control dust generation during demolition of structures or break-up of pavement;*
- *Pave, apply water three time daily, or apply (non-toxic) soil stabilizers on all unpaved parking areas and staging areas;*
- *Sweep daily (with water sweepers) all paved parking areas and staging areas;*
- *Provide daily clean-up of mud and dirt carried onto paved streets from the site;*
- *Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.);*
- *Limit traffic speeds on unpaved roads to 15 mph;*
- *Install sandbags or other erosion control measures to prevent silt runoff to public roadways;*

- *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;*
- *Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) or construction areas;*
- *Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph;*
- *Limit the area subject to excavation, grading, and other construction activity at any one time;*
- *Unnecessary idling of construction equipment shall be avoided;*
- *Equipment engines shall be maintained in proper working condition per manufacturers' specifications;*
- *During periods of heavier air pollution (May to October), the construction period shall be lengthened to minimize the amount of equipment operating at one time;*
- *Where feasible, the construction equipment shall use cleaner fuels, add-on control devices and conversion to cleaner engines.*

Mitigation Measure AIR-2*: During periods of high dust in the grading phase, crews must use National Institute for Occupational Safety and Health (NIOSH) approved N95 masks or better or other more stringent measures in accordance with the California Division of Occupational Safety and Health regulations.*

Mitigation Measure AIR-3*: The operator cab of area grading and construction equipment must be enclosed and air-conditioned.*

Response d): Less than Significant. 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 around developed areas and is surrounded by residential land uses that are generally not associated with objectionable odors. Accordingly, the proposed project is not located in the vicinity of any substantial objectionable odor sources such as those mentioned above.

Operation of the proposed project would not generate notable odors. The proposed project is a residential development, which is compatible with the surrounding land uses. Residential land uses are not typically associated with the creation of substantial objectionable odors. Occasional mild odors may be generated during landscaping maintenance (equipment exhaust), but the project would not otherwise generate odors.

The proposed project is not anticipated to produce any objectionable odors (or other emissions) at buildout that would affect a substantial number of people. Construction activities associated with the proposed project, such as paving and painting are likely to temporarily generate objectionable odors. Since odor-generating construction activities would be temporary, and are only likely to be detected by residents closest to the project site, impacts from temporary project-related odors are expected to be **less than significant** and no mitigation is required.

IV. BIOLOGICAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?		X		

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant with Mitigation. The following discussion is based primarily on the Biological Resources Due-Diligence report (see Appendix A) prepared for the project site by Moore Biological Consultants (Moore)[3]. Moore conducted a search of the California Natural Diversity Data Base (CNDDB) for the 7.5-minute Brentwood topographic quadrangle, which encompassed approximately 60 square miles surrounding the project site. Additionally, Moore reviewed the United States Fish and Wildlife Service (USFWS) IPaC Trust Report of Federally Threatened and Endangered species that may occur in or be affected by projects in and near the project site. The intent of the CNNDB search and USFWS IPaC Trust Report review was to identify wildlife and plant species, prior to the field survey, with documented occurrences

[3] Moore Biological Consultants. *Adams Lane -- Subdivision 9535 Biological Assessment*. October 2020.

within the project vicinity or have the potential to occur based on suitable habitat and geographical distribution.

On November 14, 2019 and July 16, 2020, Moore conducted field surveys of the project site to make observations of the current site conditions and note the surrounding land uses, general habitat types, and plant and wildlife species. Currently, the site is vacant and vegetated with ruderal grassland vegetation that appears to be periodically mowed and/or disked. No trees were observed within the project site; however, a few ornamental trees and small fruit trees were observed along the storm drain alignment and in the vicinity of the storm drain outfall. Additionally, the upper banks of Marsh Creek, which has been realigned and channelized, support similar upland grasses and weeds to those found on-site.

The project site is located within the boundaries of the *East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan* (ECCCHCP/NCCP), which provides a framework to protect the natural resources of eastern Contra Costa. The ECCHCP/NCCP streamlines the environmental permitting process for impacts on endangered species and requires the payment of a Development Fee to mitigate impacts to covered species. The project site is located within Fee Zone 1 of the Fee Payment Zones within the ECCCHCP/NCCP. According to the project's Planning Survey Report (see Appendix B), the 16.82-acre project site and 0.82 acres of off-site improvements to construct the proposed outfall consists of 16.5 acres classified as ruderal and 1.14 acres as Urban. As per the ECCCHCP/NCCP, the proposed project would be subject to payment of all applicable fees prior to construction.

Special Status Plant Species

The California annual grassland series (Sawyer and Keeler-Wolf, 1995) best describes this highly disturbed upland grassland vegetation on-site. The CNDDB and USFWS Species List included eight plant species that have previously been documented in the greater project vicinity, including big tarplant (*Blepharizonia plumosa ssp. plumosa*), Congdon's tarplant (*Centromadia parryi spp. congdonii*), Bolander's water hemlock (*Cicuta maculata var. bolanderi*), San Joaquin spearscale (*Extriplex joaquiniana*), Brewers western flax (*Hesperolinon breweri)*, Antioch dunes evening primrose (*Oenothera deltoides ssp. howellii*), Suisun marsh aster (*Symphotrichum lentum*), and caper-fruited tropidocarpum (*Tropidocarpum capparideum*). Antioch dunes evening primrose is the only special-status plant species noted on the USFWS IPaC Trust Report.

Special-status plants generally occur in relatively undisturbed areas in vegetation communities such as, vernal pools, marches and swamps, seasonal wetlands, riparian scrub, and areas with unusual soils. All of the plants identified occur in unique habitat types that are not present on-site. The site consists of disturbed ruderal grassland vegetation that is routinely mowed and/or disked; the grasslands in the site do not provide suitable for any special-status plant species. Marsh Creek, at the location of the outfall structure, does not contain suitable marsh or swamp habitat to support special-status plants that require specialized aquatic habitats. Due to lack of suitable habitat, it is very unlikely that special-status plants occur in the project site. Therefore, the project is not expected to impact any covered or no-take plants.

Special Status Wildlife Species

The CNNDB search identified that the following special-status wildlife species have previously been recorded in the project area: Swainson's hawk *(Bueto swainsoni),* western burrowing owl *(Athene cunnicularia),* white-tailed kite *(Elanus leucurus),* tricolored blackbird *(Agelaius tricolor),* loggerhead shrike *(Lanius ludovicianus),* San Joaquin kit fox *(Vulpes macrotis mutica),* San Joaquin pocket mouse *(Perognathus inornatus),* western pond turtle *(Emys marmorata),* California tiger salamander *(Ambystoma californiense),*northern California legless lizard *(Anniella pulchra),* vernal pool fairy shrimp *(Branchinecta lynchi)*, and western bumble bee *(Bombus occidentalis).*

It is noted that California red-legged frog (*Rana aurora draytonii*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), giant garter snake (*Thamnophis gigas*), delta smelt (*Hypomesus transpacificus*), Conservancy fairy shrimp (*Branchinecta conservatio*), vernal pool tadpole shrimp (*Lepidurus packardi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and San Bruno elfin butterfly (*Callophrus mossii bayensis*) are not recorded in the CNDDB (2020) within the search area, but are on the USFWS IPaC Trust Report

While the project site may have provided habitat for special-status wildlife species at some time in the past, farming and development have substantially modified natural habitats in the greater project vicinity, including in the site. A few special-status birds including tricolored blackbird, white-tailed kite, and loggerhead shrike may fly over the area on occasion or forage in the grasslands in the site, but it is unlikely they nest in or immediately adjacent to the site. Additionally, while the site provides potentially suitable habitat for San Joaquin kit fox, the site is outside (i.e., northwest) of the range of this species and it is unlikely that kit fox would occur in a site that is surrounded by residential development. Marsh Creek also does not provide suitable aquatic habitat for special-status fish, giant garter snake, or California tiger salamander. The project site does not provide the mosaic of scrub, chaparral, grassland, and woodland habitats required by Alameda whipsnake; the ruderal and highly disturbed grasslands in the site also do not provide suitable habitat for northern California legless lizard. There are no vernal pools or seasonal wetlands in the site for vernal pool branchiopods (i.e., fairy and tadpole shrimp). There is no coastal scrub habitat in the site for San Bruno elfin butterfly. Finally, the project site does not contain the abundant floristic resources required by western bumble bee.

Of the wildlife species identified in the CNDDB, western burrowing owl, Swainson's hawk, and western pond turtle are the only species with potential to occur in the site on more than a transitory or very occasional basis and are discussed further below. Additionally, Marsh Creek upstream of the outfall site is modeled as potential habitat for California red-legged frog in the ECCCHCP. Although not expected to occur in Marsh Creek near the outfall, this species is discussed below for completeness.

Western Burrowing Owl: The Migratory Bird Treaty Act (MBTA) and Fish and Game Code of California protect western burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Western burrowing owls are a year-long resident in a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation. The project site is within the range of western burrowing owl (Athene cunnicularia). CDFW's CNDDB contains several occurrences of western burrowing owl within a

mile of the site. The primary habitat requirement of western burrowing owl is small mammal burrows for nesting. Usually western burrowing owls nest in abandoned ground squirrel burrows, although the owls have been known to dig their own burrows in softer soils. The site was inspected for burrowing owls and ground squirrel burrows with evidence of burrowing owl occupancy (i.e., white wash, pellets, feathers). The Report indicated that no western burrowing owls were observed in the site during the 2019 and 2020 surveys and no ground squirrels or their burrows were observed in the project site. However, western burrowing owls are fairly widespread in this part of the county and there were several occurrences of burrowing owls in the CNDDB (2020) search area within a mile of the site. Therefore, this species could occur in the site in the future if burrow habitat is available. Mitigation Measure BIO-1would ensure that any potential impacts to western burrowing owls is reduced to a **less than significant level.**

Swainson's Hawk: The Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species. The MBTA and Fish and Game Code of California protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). Swainson's hawk are found in the Central Valley primarily during their breeding season, with a population known to winter in the San Joaquin Valley.

Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. No Swainson's hawks were observed in the project site during the 2019 and 2020 surveys. The grasslands in the site provide suitable foraging habitat for Swainson's hawk. The trees along the storm-drain alignment appear too small to be used for nesting by Swainson's hawk, but there are a few potentially suitable Swainson's hawk nest trees in the project vicinity. There is a row of large eucalyptus trees approximately 350 feet north of the north edge of the site that are large enough to support nesting raptors and a remnant raptor stick nest was observed in one of these trees. A red-tailed hawk was observed perched near this nest and was observed foraging in the grassland field just north of the site. A few of the larger trees associated with residences surrounding the project site have the potential to be used for nesting by Swainson's hawk. However, most of the ornamental trees intermixed within the residential subdivisions and roads surrounding the site are too small to support nesting raptors. No stick nests were observed in other trees visible from the project site.

There are a few records of nesting Swainson's hawks within a few miles of the site. The nearest occurrence of Swainson's hawks in the CNDDB (2020) search area is a 2006 record within the row of eucalyptus trees approximately 350 feet north of the site. Moore Biological Consultants also observed Swainson's hawks nesting in this same row of trees in 2015. It is possible the large stick nest observed in the eucalyptus tree is the same nest referenced in the CNDDB (2020) record. Due to the strong nest site affinity of this species, it is possible Swainson's hawks will return to this same general area to nest in future years. Therefore, the project would be required to implement standard avoidance and minimization measures under the ECCCHCP, as required by Mitigation Measure BIO-1. Implementation of Mitigation Measure BIO-1 would ensure that any potential impacts to Swainson's hawks are reduced to a **less than significant** level.

Western Pond Turtle: The western pond turtle is a state species of concern, but is not a listed species at the state or federal level. Western pond turtles are associated with permanent or nearly

permanent bodies of water with adequate basking sites such as logs, rocks or open mud banks. Pond turtles construct nests in sandy banks along slow-moving streams and ponds in the spring and the young usually hatch in 2 to 3 months. The nearest occurrence of western pond turtle in the CNDDB (2020) search area is approximately 3.5 miles northeast of the project site.

Although no western pond turtles were seen, several red-eared sliders were observed swimming in Marsh Creek and basking along the shoreline near the outfall structure during the July 2020 survey. The presence of red-eared sliders in Marsh Creek indicates the creek also provides potentially suitable habitat for western pond turtle. The banks along Marsh Creek at the outfall site are steep and vegetated in highly disturbed ruderal grasses and weeds. In the event western pond turtles are present in this section of the creek, it is unlikely they would ascend the steep bank and nest near the outfall location. Therefore, impacts to western pond turtle are **less than significant**.

California Red-Legged Frog: California red-legged frog was listed by the USFWS as a threatened species in May 1996. California red-legged frog is also classified by CDFW as a Species of Special Concern. Once abundant in low-elevation Sierra Nevada and Coastal foothills streams, this species now occurs in a patchy distribution throughout a fraction of its historic rage. The California red-legged frog typically breeds in perennial or nearly perennial well-shaded woodland ponds or the deeper plunge-pools of well-shaded streams. The nearest occurrence of California red-legged frog in the CNDDB (2020) is a 2005 record approximately 3.5 miles southwest of the site. The site is not within designated critical habitat for California red-legged frog (USFWS, 2006a).

Marsh Creek provides low quality, yet potentially suitable habitat California red-legged frog. The project site is "potential migration and aestivation habitat" in the modeled range of California red-legged frog as mapped in Appendix D of the ECCCHCP. Just south of the proposed storm drain outfall site, Marsh Creek is mapped as "potential breeding habitat" for this species. At and downstream of the proposed outfall site, Marsh Creek is not mapped as potential breeding habitat in Appendix D of the ECCCHCP.

Although considered highly unlikely, California red-legged frog could potentially travel across the on-site grasslands while dispersing from Marsh Creek, but due to intensive disking, they would not be expected to aestivate on the site. There are no notable plunge pools within Marsh Creek providing highly suitable breeding habitat; most of the creek consist of shallow runs. In any case, implementation of Mitigation Measure BIO-1 would ensure that any potential impacts to California red-legged frog are reduced to a **less than significant** level.

Nesting Raptors and Migratory Birds: While the project site does not contain any trees or shrubs, grasslands on the site and trees and shrubs along the project frontages may be used by other raptors and migratory birds protected by the Migratory Bird Treaty Act for foraging. The site does not and is not likely to provide adequate nesting habitat for any of the raptors (white-tailed kite, peregrine falcon, or golden eagle); nor does it contain adequate habitat for ringtails. However, construction activities that adversely affect the nesting success of raptors and migratory birds (i.e., lead to the abandonment of active nests) or result in mortality of individual

birds constitute a violation of State and federal laws. Therefore, Mitigation Measure BIO-1 would ensure that any potential impact is reduced to a **less than significant level.**

Conclusion

Due to the disturbed nature of the project site's ruderal annual grassland cover type, suitable habitat does not exist to support special-status plant species known to occur within the annual grassland cover type of East Contra Costa County. While the presence of special-status wildlife species is relatively unlikely, based upon the current land cover types found on-site, in accordance with the ECCCHCP, 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 and vegetation removal. 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 U.S. Fish and Wildlife Service (USFWS), or the California Department of Fish and Wildlife (CDFW). The following mitigation measures would reduce the above-stated special-status wildlife impacts to a **less than significant** level.

Mitigation Measure(s)

Mitigation Measure BIO-1: *Prior to any ground disturbance related to activities covered under the ECCCHCP, the project applicant will need to comply with the required species-specific avoidance and minimization requirements for Western Burrowing Owl, Swainson's Hawk, California Red-Legged Frog, and Golden Eagle, as outlined in Section IV.2, Required Preconstruction Surveys, Avoidance and Minimization, and Construction Monitoring, of the project's Planning Survey Report (see Appendix B of this Initial Study).*

Responses b), c): Less than Significant. Riparian habitats are described as the land and vegetation that is situated along the bank of a stream or river. Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year. Wetlands usually must possess hydrophytic vegetation (i.e., plants adapted to inundated or saturated conditions), wetland hydrology (e.g., topographic low areas, exposed water tables, stream channels), and hydric soils (i.e., soils that are periodically or permanently saturated, inundated or flooded). Vernal pools are seasonal depressional wetlands that are covered by shallow water for variable periods from winter to spring, but may be completely dry for most of the summer and fall. Vernal pools range in size from small puddles to shallow lakes and are usually found in a gently sloping plain of grassland.

As noted in the Biological Assessment, while there are no wetlands within the project site, Marsh Creek meets the technical and regulatory criteria of jurisdictional Waters of the U.S. and is defined as a "Riverine" feature in the National Wetlands Inventory (NWI). Marsh Creek is a perennial stream that has been realigned and channelized in the vicinity of the proposed storm drain outfall along the west bank of Marsh Creek. There are approximately 829 sf (0.02 acres) of jurisdictional Waters of the U.S. in the project site, as defined by the ordinary high water mark along the banks of Marsh Creek. Approximately 0.008+/- acres of jurisdictional Waters of the U.S. in the Marsh Creek channel would be filled to construct the outfall. Appropriate permits from Army Corps of Engineers, CDFW, and the Regional Water Quality Control Board (RWQCB) would be required to

fill this portion of Marsh Creek. Additionally, the Biological Assessment notes that construction of the project would have no effect on off-site waterways. Therefore, implementation of the project would have a **less than significant** impact relative to any riparian habitat, seasonal wetlands, or vernal pools as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means.

Responses d): Less than Significant. As noted in the Biological Assessment, the project site is within designated critical habitat for delta smelt. However, the project would not change regional drainage patterns. Additionally, the Biological Assessment identifies that construction of the project would have no effect on off-site waterways and no effect on the suitability of delta waterways for delta smelt. Given that the project site provides limited habitat due to previous cultivation and construction of the project would have no effect on the suitability of delta waterways for delta smelt, impacts related to the movement of any resident or migratory wildlife species or with established resident or migratory wildlife corridors, or impeding the use of wildlife nursery sites are considered **less than significant**.

Responses e): No Impact. The City of Brentwood has not adopted a tree preservation ordinance that would govern the project site; however, the City of Brentwood General Plan Policy COS 1-9 encourages the protection and incorporation of existing, native, mature, non-orchard trees as part of new developments. As previously noted, no trees are located on the project site and no off-site trees are proposed to be removed as part of the project. Therefore, the proposed project would have **no impact** related to conflicting with local policies or ordinances protecting biological resources.

Responses: f): Less than Significant with Mitigation. Vegetation on the project site currently consists of ruderal vegetation. The site is within the boundaries of the ECCCHCP/NCCP. In July 2007 the ECCCHCP/NCCP was adopted by Contra Costa County, the City of Brentwood, other member cities, the USFWS and the CDFW. The ECCCHCP/NCCP provides guidance for the mitigation of impacts to covered species. Mitigation of impacts is accomplished through the payment of a Development 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 fees 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 ECCCHCP/NCCP, anticipated project impacts could be mitigated through the payment of Development Impact fees to the ECCCHCP/NCCP Conservancy. The project site is mapped in "Fee Zone 1" in the ECCCHCP/NCCP and pursuant to Section 16.168.070 of the Brentwood Municipal Code will be required to pay a Development Fee. Implementation of Mitigation Measure BIO-2 ensures that this impact would **be less than significant**.

Mitigation Measure(s)

Mitigation Measure BIO-2*: Prior to the issuance of grading or construction permits for the project site, the developer shall submit an application and obtain coverage under the ECCCHCP. This will include payment of the applicable ECCCHCP per- acre fee in effect for Zone I in compliance with Section 16.168.070 of the Brentwood Municipal Code. The developer shall receive a Certificate of Coverage from the City of Brentwood and submit a construction monitoring report to the ECCC Habitat Conservancy for review and approval. The Certificate of Coverage will confirm the fee has been received, that other ECCC HCP/NCCP requirements have been met or will be performed, and will authorize take of covered species.*

V. CULTURAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

RESPONSES TO CHECKLIST QUESTIONS

Response a): No Impact. An Archaeological Assessment Report, dated December 2019, was prepared for the project site by Basin Research Associates (see Appendix C). A field survey was conducted by Basin Research Associates on November 21, 2019, which noted the site appeared recently tilled and did not contain any buildings or significant architectural resources.

The report included a prehistoric and historic site records and literature search completed by the California Historical Resources Information Search, Northwest Information Center, Sonoma State University, Rohnert Park on December 4, 2019 (CHRIS/NWIC File 19-0815). The CHRIS/NWIC record search noted that no prehistoric or historic era archaeological sites have been recorded, reported, or identified in or adjacent to the proposed project site. Additionally, seven reports are on file at the CHRIS/NWIC for portions of the project site and surrounding areas, which were all negative for archaeological resources. Additionally, the record search indicated that the project site does not contain any recorded buildings or structures listed on the State Office of Historic Preservation Historic Property Directory (which includes listings of the California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and the National Register of Historic Places).

It should be noted that the 2014 Brentwood General Plan Update EIR identifies 24 historic properties in the Brentwood Planning Area. None of the 24 properties listed are within the proposed project site[4]. Additionally, there are no existing buildings, structures, or objects on the project site. Therefore, there is nothing on the site that could be considered a "historical resource" under Section 15064.5 in the CEQA handbook.

For the above-stated reasons, development of the proposed project would have **no impact** on historical resources.

Responses b), c): Less than Significant with Mitigation. As noted above, the Archaeological Assessment Report prepared by Basin Research Associates included a CHRIS/NWIC record search of the project site and surrounding area (CHRIS/NWIC File 19-0815). The CHRIS/NWIC

[4] City of Brentwood. 2014 Brentwood General Plan Update EIR [pg. 3.5-7]. July 22, 2014.

record search noted that no prehistoric or historic era archaeological sites have been recorded, reported, or identified in or adjacent to the project site. Additionally, the field survey conducted by Basin Research Associates on November 21, 2019 found no prehistoric, combined prehistoric/historic or historic era archaeological materials or significant architectural resources were observed on-site.

Given that no known archaeological resources are associated with the project site, the subject parcel is considered of low archaeological sensitivity for prehistoric cultural resources. However, ground-disturbing activities may have the potential to uncover buried cultural deposits. As a result, during construction and excavation activities, previously unknown archaeological resources, including human bone, may be uncovered, resulting in a potentially significant impact. Implementation of the following mitigation measures would reduce the construction-related impacts to a **less than significant** level.

Mitigation Measure(s)

Mitigation Measure CUL-1: *Prior to grading permit issuance, the developer shall submit plans to the Community Development Department for review and approval which indicate (via notation on the improvement plans) that if historic and/or cultural resources are encountered during site grading or other site work, all such work shall be halted immediately within 25 feet of the area of discovery and the developer shall immediately notify the Community Development Department of the discovery. In such case, the developer shall be required, at their own expense, to retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the Community Development Department for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery would not be allowed until the preceding work has occurred.*

Mitigation Measure CUL-2: *Pursuant to State Health and Safety Code §7050.5 (c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the Contra Costa County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the most likely descendant. The most likely descendant shall work with the contractor to develop a program for reinternment of the human remains and any associated artifacts. Additional work is not to take place within the immediate vicinity of the find until the identified appropriate actions have been implemented.*

VI. ENERGY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Appendix F of the State CEQA Guidelines requires consideration of the potentially significant energy implications of a project. CEQA requires mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (Public Resources Code Section 21100[b][3]). According to Appendix F of the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the proposed project would be considered "wasteful, inefficient, and unnecessary" if it were to violate state and federal energy standards and/or result in significant adverse impacts related to project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The proposed project includes the construction of 51 single-family residential units. The amount of energy used at the project site would directly correlate to the size of the proposed units, the energy consumption of associated unit appliances, and outdoor lighting. Other major sources of proposed project energy consumption include fuel used by vehicle trips generated during project construction and operation, and fuel used by off-road construction vehicles during construction.

The following discussion provides calculated levels of energy use expected for the proposed project, based on commonly used modelling software (i.e. CalEEMod v.2020.4.0 and the California Air Resource Board's EMFAC2021). It should be noted that many of the assumptions provided by CalEEMod are conservative relative to the proposed project. Therefore, this discussion provides a conservative estimate of proposed project emissions.

Electricity and Natural Gas

Electricity and natural gas used by the proposed project would be used primarily to power on-site buildings. Total annual electricity (kWh) and natural gas (kBTU) usage associated with the operation of the proposed project are shown in Table 4, below (as provided by CalEEMod).

According to Calico's *Appendix A: Calculation Details for CalEEMod*, CalEEMod uses the California Commercial End Use Survey (CEUS) database to develop energy intensity value for non-residential buildings. The energy use from residential land uses is calculated based on the

Residential Appliance Saturation Survey (RASS). Similar to CEUS, this is a comprehensive energy use assessment that includes the end use for various climate zones in California.

Table 4: Project Operational Natural Gas and Electricity Usage

Emissions[(a)]	*Natural Gas (kBTU/year)*	*Electricity (kWh/year)*
Single Family Housing	1,358,110	399,494
Total	**1,358,110**	**399,494**

SOURCE: CALEEMOD (V.2020.40)

Energy usage during the operational phases of the proposed project would be typical for a project of this kind, and therefore would not represent a wasteful, inefficient, or unnecessary consumption of energy resources. Additionally, the proposed project would not conflict with or obstruct any state or local plan for renewable energy or energy efficiency.

On-Road Vehicles (Operation)

The proposed project would generate vehicle trips during its operational phase. In order to calculate new daily vehicle trips and operational on-road vehicle energy usage and emissions, default average daily trips and trip lengths generated by CalEEMod were used, which are based on the project land use, location and urbanization level parameters De Novo (the Initial Study consultant) selected within CalEEMod (i.e. "Single Family Housing" Land Use, "Bay Area Air Quality Management District" project location, and "Urban" setting, respectively). These values are provided by the individual districts or use a default average for the state, depending on the location of the proposed project (CAPCOA, 2021). Based on the CalEEMod modeling results, the project would generate approximately 3,010 average daily vehicle miles travelled (Average Daily VMT). Using fleet mix data provide by CalEEMod (v2040.4.0), and Year 2022 gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2021, De Novo derived weighted MPG factors for operational on-road vehicles of approximately 26.5 MPG for gasoline and 8.7 MPG for diesel vehicles. With this information, De Novo calculated as a conservative estimate that the unmitigated proposed project would generate vehicle trips that would use a total of approximately 109 gallons of gasoline and 16 gallons of diesel fuel per day, on average, or 39,621 gallons of gasoline and 5,811 annual gallons of diesel fuel per year. See Appendix D for a detailed calculation.

On-Road Vehicles (Construction)

The proposed project would also generate on-road vehicle trips during project construction (from construction workers and vendors). Estimates of vehicle fuel consumed were derived based on the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod, and Year 2022 gasoline MPG factors provided by EMFAC2021. For the purposes of simplicity, it was assumed that all worker vehicles used gasoline as a fuel source (as opposed to diesel fuel or alternative sources) and all vendor vehicles used diesel fuel as a fuel source (as opposed to gasoline or alternative sources). Table 6, below, describes gasoline and diesel fuel used by on-road mobile sources during each phase of the construction schedule. As shown, the vast majority of on-road mobile vehicle fuel used during the

construction of the proposed project would occur during the building construction phase. See Appendix D for a detailed calculation.

Table 6: On-Road Mobile Fuel Generated by Project Construction Activities – By Phase

Construction Phase	*# of Days*	*Total Daily Worker Trips[(a)]*	*Total Daily Vendor Trips[(a)]*	*Gallons of Gasoline Fuel[(b)]*	*Gallons of Diesel Fuel[(b)]*
Site Preparation	10	18	-	74	-
Grading	30	20	-	246	-
Building Construction	100	18	5	737	662
Paving	120	15	-	123	-
Architectural Coating	20	4	-	33	-
Total	**N/A**	**N/A**	**N/A**	**1,213**	**662**

NOTE: [(A)] PROVIDED BY CALEEMOD. [(B)]SEE APPENDIX D FOR FURTHER DETAIL

SOURCE: CALEEMOD (V.2020.4.0); EMFAC2021.

Off-Road Vehicles (Construction)

Off-road construction vehicles would use diesel fuel during the construction phase of the proposed project. A non-exhaustive list of off-road constructive vehicles expected to be used during the construction phase of the proposed project includes: cranes, forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO_2 emissions expected to be generated by the proposed project (as provided by the CalEEMod output), and a CO_2 to diesel fuel conversion factor (provided by the U.S. Energy Information Administration), the proposed project would use a total of approximately 9,784 gallons of diesel fuel for off-road construction vehicles (during the site preparation and grading phases of the proposed project). Detailed calculations are provided in Appendix D.

Other

Proposed project landscape maintenance activities would generally require the use fossil fuel (i.e. gasoline) energy. For example, lawn mowers require the use of fuel for power. As an approximation, it is estimated that landscape care maintenance would require approximately two individuals one full day per month, or 208 hours per year (or 104 hours per year per landscaper). Assuming an average of approximately 0.5 gallons of gasoline used per person-hour, the proposed project would require the use of approximately 56 gallons of gasoline per year to power landscape maintenance equipment. The energy used to power landscape maintenance equipment would not differ substantially from the energy required for landscape maintenance for similar projects.

The proposed project could also use other sources of energy not identified here. Examples of other energy sources include alternative and/or renewable energy (such as solar PV) and/or on-site stationary sources (such as on-site diesel generators) for electricity generation. The proposed project will install a solar system on every home to satisfy the majority of each home's estimated energy use, which would reduce the need for fossil fuel-based energy (for proposed project buildings), including for electricity.

Conclusion

The proposed project would use energy resources for the operation of project buildings (electricity and natural gas), for on-road vehicle trips (e.g. gasoline and diesel fuel) generated by the proposed project, and from off-road construction activities associated with the proposed project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed project would be responsible for conserving energy, to the extent feasible, and relies heavily on reducing per capita energy consumption to achieve this goal, including through Statewide and local measures.

The proposed project would be in compliance with all applicable Federal, State, and local regulations regulating energy usage. For example, PG&E is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the Statewide Renewable Portfolio Standard (RPS) to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E is expected to achieve at least a 50% mix of renewable energy resources by 2030. Additionally, energy-saving regulations, including the latest State Title 24 building energy efficiency standards ("part 6"), would be applicable to the proposed project. Other Statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

As a result, the proposed project would not result in any significant adverse impacts related to project energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for each stage of the project including construction, operations, maintenance, and/or removal. PG&E, the electricity and natural gas provider to the site, maintains sufficient capacity to serve the proposed project. The proposed project would comply with all existing energy standards, including those established by the City of Brentwood, and would not result in significant adverse impacts on energy resources. Furthermore, existing connections exist between the project site and nearby pedestrian and bicycle pathways, and public transit access exists nearby, reducing the need for local motor vehicle travel. Although improvements to the City's pedestrian, bicycle, and public transit systems would provide further opportunities for alternative transit, the proposed project would be linked closely with existing networks that, in large part, are sufficient for most residents of the proposed project and the City of Brentwood as a whole. For these reasons, the proposed project would not be expected cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the threshold as described by Appendix F of the CEQA Guidelines. This is a ***less than significant*** impact.

VII. GEOLOGY AND SOILS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation*	*Less Than Significant Impact*	*No Impact*
a) Directly or indirectly cause 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 or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.		X		
ii) Strong seismic ground shaking?		X		
iii) Seismic-related ground failure, including liquefaction?		X		
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

RESPONSES TO CHECKLIST QUESTIONS

Responses a.i), a.ii): Less than Significant with Mitigation. The following discussion is based primarily on a Geotechnical Exploration Report dated January 3, 2020 prepared by ENGEO (see Appendix E) for the project site.

According to the report, the site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone; however, large (>M_w7) earthquakes have historically occurred in the Bay

Area and along the margins of the Central Valley with many earthquakes of low magnitude occurring every year. The nearest earthquake faults zoned as active by the State of California Geological Survey are the Greenville fault located about 8.5 miles to the southwest and the Great Valley Fault located approximately 9 miles to the west, mapped as Quartnernary Age. The Greenville Fault is considered to be capable of a moment magnitude earthquake of 6.8 to 7.0. The Great Valley fault is a blind thrust fault with no known surface expression; the postulated fault location has been based on regional seismic activity and isolated subsurface information. Portions of the Great Valley fault are considered seismically active thrust faults; however, since the Great Valley fault segments are not known to extend to the ground surface, the State of California has not defined Earthquake Fault Hazard Zones around the postulated traces.

Other active faults in the San Francisco Bay Area capable producing significant ground shaking at the site include the Concord-Green Valley Fault (16 miles west), the Calaveras Fault (19 miles southwest), the Hayward Fault (28 miles southwest), and the San Andreas Fault (46 miles southwest).

Potential seismic hazards resulting from a nearby moderate to major earthquake could generally be classified as primary and secondary. The primary seismic hazard is ground rupture, also called surface faulting. The common secondary seismic hazards include ground shaking and ground lurching.

Ground Rupture

Because the property does not have known active faults crossing the site, and the site is not located within an Earthquake Fault Special Study Zone, ground rupture is unlikely at the subject property.

Ground Shaking

An earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the site, similar to that which has occurred in the past. The project would be built using standard engineering and seismic safety design techniques. Building design at the project site would be completed in conformance with the recommendations of the geotechnical investigation required by Mitigation Measure GEO-2 below, as reviewed and approved by the City of Brentwood Building Division. The structures would meet the requirements of applicable Building and Fire Codes, including the 2019 California Building Code (CBC), as adopted or updated by the City of Brentwood. Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures would be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage.

Ground Lurching

Ground lurching is a result of the rolling motion imparted to the ground surface during energy released by an earthquake. Such rolling motion could cause ground cracks to form in weaker soils. The potential for the formation of these cracks is considered greater at contacts between deep alluvium and bedrock. Such an occurrence is possible at the site as in other locations in the Bay Area, but based on the site location, the offset is expected to be very minor.

Conclusion

The project site is not within an Alquist-Priolo Special Studies Zone; however, the Brentwood area is located in a seismically active zone. Six active faults are located within an approximate 50-mile radius of the project site. The nearest State of California zoned, active fault is the Greenville fault located about 8.5 miles to the southwest of the project site. 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. In accordance with Action SA 1 of the City of Brentwood General Plan, a geotechnical report was prepared by ENGEO for the project, which included a number of earthwork, foundation, and design recommendations to be incorporated into the project design plans and specifications. These recommendations have been incorporated into Mitigation Measure GEO-2. Implementation of the following mitigation measures would ensure the potential impacts are **less than significant.**

Mitigation Measure(s)

Mitigation Measure GEO-1*: All project buildings shall be designed in conformance with the current edition of the California Building Code (CBC), as adopted and amended by the City of Brentwood.*

Mitigation Measure GEO-2*: Prior to final design approval and issuance of building permits for each phase of the project, the project applicant shall incorporate the recommendations included in the Geotechnical Exploration prepared by ENGEO (dated January 3, 2020) into the project design and specifications related to the following topics:*

- *Earthwork*
  - *General Site Clearing*
  - *Undocumented Fill Removal*
  - *Over-Optimum Soil Moisture Conditions*
  - *Acceptable Fill*
  - *Fill Compaction*
  - *Slopes*
  - *Site Drainage*
- *Foundation Design*
  - *Post-Tensioned Mat Foundations*
  - *Exterior Flatwork*
  - *Trench Backfill*
- *Soundwall and Retaining Walls*
  - *Lateral Soil Pressures*

  - *Wall Drainage*
  - *Backfill*
  - *Foundations*
- *Pavement Design*
  - *Flexible Pavements*
  - *Subgrade and Aggregate Base Compaction*

Mitigation Measure GEO-3*: All grading and foundation plans for the development shall be designed by a Civil and Structural Engineer and reviewed and approved by the Director of Public Works/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.*

Responses a.iii), c): Less than Significant with Mitigation. Soil liquefaction results from loss of strength during cyclic loading, such as that which is imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, and fine-grained sands. The Geotechnical Exploration Report prepared by ENGEO noted the site contained fine-grained clayey soils and no groundwater was encountered during the site visit. For these reasons, ENGEO notes low potential for soil liquefaction at the site. Additionally, Mitigation Measure GEO-2 requires the implementation of recommendations included in ENGEO's Geotechnical Exploration Report to ensure that all on-site fill soils are properly compacted and comply with the applicable safety requirements established by the CBC to reduce risks associated with unstable soils and excavations and fills, and that any issues with soil corrosive and liquefaction are addressed at the design level. Implementation of Mitigation Measure GEO-2 would reduce impacts to **less than significant** levels related to soil stability, and the potential result in, lateral spreading, subsidence, liquefaction or collapse.

Mitigation Measure(s)
Implement Mitigation Measure GEO-2

Responses a, iv): Less than Significant. The Geotechnical Exploration Report prepared by ENGEO noted the site is relatively flat and that the risk of landslides is considered low to negligible. This is a **less than significant** impact.

Response b): Less than Significant with Mitigation. The project site currently consists of undeveloped land. According to the project site plans prepared for the proposed project, development of the proposed project would result in the creation of new impervious surface areas throughout the project site. The development of the project site would also cause ground disturbance of top soil. The ground disturbance would be limited to the areas proposed for grading and excavation, including the residential building pads and drainage, sewer, and water infrastructure improvements. After grading and excavation, and prior to overlaying the disturbed ground surfaces with impervious surfaces and structures, the potential exists for wind and water erosion to occur, which could adversely affect downstream storm drainage facilities.

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.

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

Mitigation Measure(s)

Mitigation Measure GEO-4: *Prior to grading permit issuance, the applicant shall submit a final grading plan to the Director of Public Works/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 Director of Public Works/City Engineer.*

Mitigation Measure GEO-5: *Any applicant for a grading permit shall submit an erosion control plan to the Director of Public Works/City Engineer for review and approval. The 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.*

Mitigation Measure GEO-6*: 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 Public Works Department prior to commencement of grading.*

Response d): Less than Significant with Mitigation. Expansive soils shrink/swell when subjected to moisture fluctuations, which could cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Building damage due to moisture changes in expansive soils could be reduced by appropriate grading practices and using post-tensioned slab foundations or similarly stiffened foundation systems which are designed to resist the deflections associated with soil expansion. ENGEO's Geotechnical Exploration Report notes that the near surface soils on-site exhibit a high expansion potential. Therefore, because of the potential presence of expansive soils on the site, a **potentially significant** impact could occur. To reduce the potential for damage to the planned structures, ENGEO recommends that all residential structures be supported on properly designed post-tensioned (PT) mat foundations bearing on engineered fill or compacted native soils. In addition, to reduce expansion potential of the underlying soils, ENGEO recommends that clayey soils be compacted at a slightly lower relative compaction at a moisture content well over optimum. Implementation of Mitigation Measure GEO-2 ensures the project applicant incorporates the above recommendations into the design of the project, as well as a number of other earthwork and design recommendations to

ensure the safety and welfare of future project residence. Therefore, this impact is considered **less than significant with mitigation**.

Mitigation Measure(s)
Implementation of Mitigation Measure GEO-2.

Response e): No Impact. The project has been designed to connect to the existing City sewer system and septic systems will not be used. Therefore, **no impact** would occur related to soils incapable of adequately supporting the use of septic tanks.

Response f) Less than Significant with Mitigation. The City's General Plan indicates that known paleontological resources do not exist within the City Planning Area. However, development allowed under the General Plan could result in the discovery and disturbance of previously unknown or undiscovered paleontological resources. Geologic formations, including the Upper Cretaceous marine sedimentary rocks and various Quaternary subunits, that have a moderate to high potential for paleontological resources, are present throughout many areas of the City. Therefore, previously unknown paleontological resources could exist within the project site. Thus, ground-disturbing activity associated with implementation of the proposed project, would have the potential to disturb or destroy such resources. Therefore, the proposed project could result in the direct or indirect destruction of a unique paleontological resource, resulting in a potentially significant impact. Action COS 6e of the City of Brentwood General Plan requires all new development projects to comply with procedures upon discovery of unique paleontological resources. Consistent with Action COS 6e, Mitigation Measure GEO-7 would require ensure impacts related to disturbance of paleontological resources would be less than significant. Implementation of Mitigation Measure GEO-7 would ensure this impact is considered **less than significant**.

Mitigation Measure(s)
Mitigation Measure GEO-7*: Should construction or grading activities result in the discovery of unique paleontological resources, all work within 100 feet of the discovery shall cease. The Community Development Director shall be notified, and the resources shall be examined by a qualified archaeologist, paleontologist, or historian, at the developer's expense, for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist, paleontologist, or historian shall submit to the Community Development Department for review and approval a report of the findings and method of curation or protection of the resources. Work may only resume in the area of discovery when the preceding work has occurred.*

VIII. GREENHOUSE GAS EMISSIONS – WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. 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 ($MTCO_2e/yr$).

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, an assessment of that project's GHG emissions would 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 51 single-family residential dwelling units, a GHG assessment is not required for the proposed project.

In any case, the City of Brentwood General Plan EIR previously analyzed GHG emissions under worst-case conditions within (1) the existing boundaries of the City of Brentwood, (2) upon full buildout of the General Plan within the city limits, and (3) upon buildout within the City Planning Area. The City of Brentwood General Plan EIR found that, upon full buildout of the General Plan within the city limits, CO_2e emissions are projected to be 361,490.3 metric tons per year, which represents a decrease of approximately 30 percent when compared with existing conditions. This reduction is primarily expected to be due to State actions affecting vehicle and building energy efficiency, including the Low Carbon Fuel Standard (LCFS), the Pavley rule, updates to the Title 24 energy efficiency requirements, and the Renewable Portfolio Standard (RPS). The General Plan EIR found all impacts to greenhouse gases and climate change to be less than significant, and that the General Plan would be consistent with the State's GHG reduction goals established under AB 32. AB 32 was passed by the California legislature in 2006, which established a Statewide reduction goal of a reducing GHG emissions to 1990 levels by 2020. The California Air Resources Board determined this to be approximately equivalent to a reduction of 15% below emissions under a "business as usual" scenario by 2020.

The proposed project would be located on a site that was included within the General Plan full buildout scenario. The proposed project site was designated for Residential Very Low Density uses in the Brentwood General Plan in effect at the time ABAG projections were forecast. The proposed project is consistent with the General Plan land use designation, which was assumed to occur as part of the General Plan EIR analysis. Therefore, the proposed project is consistent with the assumptions and calculations utilized within the General Plan EIR, and implementation of the proposed project would not result in cumulative GHG emissions beyond the levels analyzed and disclosed in the General Plan EIR. As such, the proposed project would be consistent with the State's GHG reduction goals established under AB 32. In addition, the proposed project would not conflict with the more recent Statewide legislation (SB 32), passed into law in 2016, which codifies a 2030 GHG emissions reduction target of 40% below by 1990 levels by 2030. The BAAQMD is currently working to incorporate the GHG reduction requirements of SB 32 into their GHG thresholds of significance.

The General Plan EIR included a large number of policies and actions related to greenhouse gases that would be applicable to the proposed project. Implementation of these policies and actions would ensure that the proposed project would be consistent with the assumptions incorporated into the General Plan EIR, and would therefore be consistent with the State's 2020 GHG reduction goals established under AB 32. In addition, the proposed project would not conflict with more recent legislation, SB 32, which establishes a Statewide GHG reduction target for 2030. 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**.

IX. HAZARDS AND HAZARDOUS MATERIALS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. The following discussion addresses potential hazards associated with existing site conditions of the project site, as well as the potential use of hazardous materials during operation of the project.

Existing Site Conditions and Associated Hazards

A Phase I and Phase II Environmental Site Assessments (Phase I and II Reports), dated January 3, 2020, were prepared for the project site at APN: 016-040-005 by ENGEO (see Appendix F and G).

As part of the Phase I Report, ENGEO conducted a review of property records, previous environmental reports, and historical record sources to determine the previous site uses and if there are any environmental liens and/or activity use limitations on the property. ENGEO also conducted a review of federal, state and local regulatory agency databases provided by

Environmental Data Resources (EDR) to evaluate the likelihood of contamination incidents at and near the site. The database sources and the search distances are in general accordance with the requirements of ASTM E 1527-13. The purpose of the records review was to obtain reasonably available information to help identify Recognized Environmental Conditions (RECs).

The results of the records search and review of regulatory agency records/databases found no documentation of hazardous materials violations or discharge on the property. Furthermore, no contaminated facilities within the appropriate ASTM search distances would be expected to impact the project site. To confirm site conditions, ENGEO conducted a reconnaissance of the project site on December 18, 2019. Results of the site reconnaissance and records searches are as follows:

Site Reconnaissance

The site was observed as vacant land covered with grass. Signs indicating the presence of a natural gas pipeline were found near the northern boundary of the project site; however, based on communication with Keith Burrows, a representative from CalPine Pipeline Company, ENGEO identified that a 3-inch natural gas pipeline ran east-west along the northern boundary of the project site, which was abandoned in 1988. No hazardous substances or petroleum products/containers were observed within the project site. ENGEO noted that no above storage tanks were observed on the property and no evidence of underground storage tanks were observed during site reconnaissance. Additionally, no odors, pools of potentially hazardous liquids, drums, polychlorinated biphenyls, pits, pond, lagoons, stained soil, stressed vegetation, solid waste/debris, wastewater, stockpiles/fill material, wells, or septic tanks were found or observed within the project site during the site reconnaissance.

Structures

No existing structures were identified at the site.

Hazardous Substance

No hazardous substances including raw materials; finished products and formulations; hazardous wastes; hazardous constituents and pollutants including intermediates and byproducts that are currently present at the site; and no unidentified substance containers (when open or damaged, and containing unidentified substances suspected of being hazardous or petroleum products) were observed at the Site.

ENGEO concluded that the assessment has revealed no evidence of Recognized Environmental Conditions, Controlled Recognized Environmental Conditions or Historical Recognized Environmental Conditions in connection with the Site. However, due to the project site's historical agriculture use, ENGEO recommended an agrichemical assessment be performed to determine the potential impact of agrichemicals on the near-surface soils.

Pesticide, Arsenic, and Lead Soil Sampling

As part of the Phase II Report, ENGEO conducted a preliminary investigation to assess potential residual concentrations of legacy agrichemicals that may exist in near-surface soils, consistent with the recommendations of the Phase I Report.

Sampling was conducted in accordance with the California Department of Toxic Substances Control (DTSC) *Interim Guidance for Sampling Agricultural Properties (Third Revision, August 2008).* ENGEO collected soil samples from 28 soil sample locations to a depth of approximately 0 to 6 inches of native soil. Seven 4-point composite samples were analyzed for organochlorine pesticides (OCPs) (EPA Method 8081A) and seven samples were discretely analyzed for lead and arsenic (EPA Method 6010). The results of the soil sampling indicated that:

- DDD concentrations ranged from non-detect to 14 µg/kg;
- DDE concentrations ranged from 26 to 120 µg/kg;
- DDT concentrations ranged from non-detect to 14 µg/kg;
- Dieldrin concentrations ranged from non-detect to 2.9 µg/kg;
- Mirex concentrations ranged from non-detect to 7.1 µg/kg;
- Arsenic concentrations ranged from 6.8 to 8.6 mg/kg; and
- Lead concentrations ranged from 10 to 12 mg/kg.

Review of the laboratory test results found low- to non-detectable concentrations for the detected analytes. The reported concentrations are below the current residential screening levels, or within typical background concentrations for metals. For example, the concentrations of arsenic on-site were determined to be within the range of background arsenic concentrations for Brentwood and are not indicative of anthropogenic impacts and the levels of lead concentration on-site were found to be below the current residential screening level of 80 mg/kg. Based on the soil samples analyzed, ENGEO determined that the soils at the project site do not appear to have been significantly impacted by past uses.

Proposed Project Uses

The proposed project has limited potential for the routine transport, use, or disposal of hazardous materials. The proposed residential uses would not involve the routine transport, use, or disposal of hazardous materials, or present a reasonably foreseeable release of hazardous materials. Hazardous materials associated with the residential uses would consist mostly of typical household-type cleaning products and fertilizers, which would be utilized in small quantities and in accordance with label instructions.

Conclusion

Development of the proposed project would include the construction of 51 residential units and associated infrastructure. Projects that involve the routine transport, use, or disposal of

hazardous materials are typically industrial in nature. The proposed project would not involve the routine transport, use, or disposal of hazardous materials. Additionally, the Phase I prepared for the project site identified no RECs at the project site and the Phase II Report indicated that the agrichemical concentrations on-site are below the current residential screening levels or within typical background concentrations for metals. The existing natural gas pipeline on the site, which was abandoned in 1988, does not contain hazardous materials, and will be removed during construction activities. For these reasons, this is a **less than significant** impact, and no mitigation is required.

Response c): Less than Significant. The nearest existing or proposed school is Marsh Creek Elementary School located approximately 150 feet to the northwest across Adams Lane. As discussed above in Responses a) and b), the proposed project has limited potential for the routine transport, use, or disposal of hazardous materials. The proposed residential uses would not involve the routine transport, use, or disposal of hazardous materials, or present a reasonably foreseeable release of hazardous materials. Therefore, 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 ¼ mile of an existing or proposed school.

Response d): No impact. In preparing the Phase 1 Report (2020), ENGEO performed a search of Federal, State, and local hazardous materials/sites databases regarding the project site and nearby properties. The project site is not listed on the Standard Environmental Record source databases. ENGEO identified four facilities within the ASTM search distances of the project site, including:

- Dutra, Leroy (Smith Lane) – Envirostor database;
- Skipolini Property (7281 Lone Tree Way) – Envirostor database;
- Sand Creek Elementary (Sand Creek Road) – Envirostor database; and
- Chevron, Minnesota Avenue (Cambrian Place) – GeoTracker (Clean-Up Program Site).

Additionally, the following facilities listed within the appropriate ASTM search distances of the project site on the Additional Environmental Record sources, including:

- Brentwood Health Center (171 Sand Creek Road) – CERS HAZ WASTE, RCRA Non Gen/NLR, and Contra Costa County Site List databases;
- San Francisco Nike Battery 08-09 (Richmond, CA) – FUDS database;
- Clemons, Earl (1800 Lone Oak Road) – Contra Costa County Site List databases; and
- Marsh Creek Apartment (7251 Brentwood Boulevard) – GeoTracker (Clean-Up Program Site).

Based on the distances to the identified database sites, regional topographic gradient, and the environmental database review findings, ENGEO believe is unlikely that any of the above-stated database sites pose an environmental risk to the property. Additionally, no orphan properties appear within the ASTM recommended radius search criteria.

The project site has not been identified in any of the hazardous databases, nor is the site on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. As a result, the proposed project would have **no impact** under this criterion.

Responses e): No impact. The project site is not within an airport land use plan or within two miles of an airport. The nearest airport, Funny Farm Airfield, is a private airfield located approximately 3.0 miles east of the project site. Therefore, implementation of the proposed project would result in **no impact** to this environmental topic.

Response f): Less than significant. The Brentwood General Plan currently designates the proposed project site for residential very low density uses, such as those proposed for the project. Implementation of the proposed project would not result in any substantial modifications to the existing roadway system and would not interfere with potential evacuation or response routes used by emergency response teams. Therefore, the impact would be **less than significant**.

Response g): No impact. The site is not located within an area where wildland fires occur. The site is predominately surrounded by existing development which have a low potential for wildland fires. Therefore, **no impact** would occur.

X. HYDROLOGY AND WATER QUALITY – WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		X		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site;		X		
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;		X		
(iii) 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; or		X		
(iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?		X		

RESPONSES TO CHECKLIST QUESTIONS

Responses a): Less than Significant with Mitigation.

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.

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 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 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 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.

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

Mitigation Measure(s)

Mitigation Measure HYD-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 to the SWRCB. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The contractor shall implement BMPs to reduce pollutants in stormwater discharges consistent with the requirements established in 15.52.60(F): Erosion and Sediment Control of the City's Municipal Code. 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.*

Mitigation Measure HYD-2: *Prior to the completion of construction, the applicant shall prepare and submit, for the City's review, an acceptable Stormwater Control Operation and Maintenance Plan. In addition, prior to the sale, transfer, or permanent occupancy of the site 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 accept the responsibility for maintenance of stormwater management facilities until such responsibility is transferred to another entity.*

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 Director of Public Works/City Engineer. Typical routine maintenance consists of the following:

- *Limit the use of fertilizers and/or pesticides. Mosquito larvicides shall be applied only when absolutely necessary.*
- *Replace and amend plants and soils as necessary to ensure the planters are effective and attractive. Plants must remain healthy and trimmed if overgrown. Soils must be maintained to efficiently filter the storm water.*

- *Visually inspect for ponding water to ensure that filtration is occurring.*
- *After all major storm events, remove bubble-up risers for obstructions and remove if necessary.*
- *Continue general landscape maintenance, including pruning and cleanup throughout the year.*
- *Irrigate throughout the dry season. Irrigation shall be provided with sufficient quantity and frequency to allow plants to thrive.*
- *Excavate, clean and or replace filter media (sand, gravel, topsoil) to insure adequate infiltration rate (annually or as needed).*

Mitigation Measure HYD-3: *Design of both the on-site drainage facilities shall meet with the approval of both the Director of Public Works/City Engineer and the Contra Costa County Flood Control and Water Conservation District prior to the issuance of grading permits.*

Mitigation Measure HYD-4: *Contra Costa County Flood Control and Water Conservation District drainage fees for the Drainage Area shall be paid prior to issuance of grading permits to the satisfaction of the Director of Public Works/City Engineer.*

Mitigation Measure HYD-5: *The Applicant/Developer shall ensure that the project site shall drain into a street, public drain, or approved private drain, in such a manner that un-drained depressions shall not occur. Satisfaction of this measure shall be subject to the approval of the Director of Public Works/City Engineer.*

Mitigation Measure HYD-6: *The construction plans shall indicate roof drains emptying into a pipe leading to the project bioswale areas for the review and approval of the Director of Public Works/City Engineer prior to the issuance of building permits.*

Mitigation Measure HYD-7: *The improvement plans shall indicate concentrated drainage flows not crossing sidewalks or driveways for the review and approval of the Director of Public Works/City Engineer prior to the issuance of grading permits.*

Response b): Less than Significant. The City provides domestic, potable water to its residents using both surface water and groundwater resources. The City has seven active groundwater wells, which provided approximately 30 percent of the potable water supplied during 2010. Brentwood is located within the East Contra Costa Subbasin (ECC Subbasin) of the San Joaquin Valley Groundwater Basin. In February 2019, the Department of Water Resources approved dividing the Tracy Subbasin of the San Joaquin Valley Groundwater Basin into two subbasins (e.g., East Contra Costa Subbasin and the new Tracy Subbasin) thereby creating a separate groundwater basin entirely within Contra Costa County. While the project would create new impervious surface areas on portions of the 16.8-acre project site, the ECC Subbasin comprises 107,596 acres (168 square miles) underlying all or portions of the Cities of Antioch, Oakley, Brentwood, the Town of Discovery Bay and the communities of Bethel Island Byron and Knightsen. Therefore, recharge of the groundwater basin within which the project site is located comes from many sources over Contra Costa County.

The new impervious surfaces associated with the project would not cause a substantial depletion of recharge within the ECC Subbasin. The proposed project is consistent with the General Plan

land use designation for the site, as the potential water demand of future site development was accounted for and considered in the General Plan EIR and the most recent Urban Water Management Plan. As demonstrated in these documents, the City has adequate supply availability to meet future buildout water demands. Additionally, as noted in the City of Brentwood's 2020 Urban Water Management Plan, the creation of the ECC Subbasin would not negatively affect sustainable groundwater use in the area and does not affect existing or historic water supply coordination with local agencies in the subbasin. Therefore, implementation of the project would not cause a substantial depletion of recharge within the ECC Subbasin.

As discussed above, the City of Brentwood has adequate water supply to meet the demands of the proposed project as well as future anticipated development allowed under the Brentwood General Plan, as described in greater detail in *Section XIX, Utilities and Service Systems.* The project itself does not include installation of any wells, but would include eventual connections to existing City of Brentwood water infrastructure, including connection to the City's potable water distribution system. The project will also be required to connect to the non-potable water system and provide non-potable irrigation to the bioretention basin, Parcel A. Additionally, the City is currently in the process of developing and expanding infrastructure for non-potable water and will require the applicant to provide stubs to Parcel A for future connection.

Overall, the proposed 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.

Responses c.i), c.ii), c.iii, e): Less than Significant with Mitigation

When land is in a natural or undeveloped condition, soils, mulch, vegetation, and plant roots absorb rainwater. This absorption process is called infiltration or percolation. Much of the rainwater that falls on natural or undeveloped land slowly infiltrates the soil and is stored either temporarily or permanently in underground layers of soil. When the soil becomes completely soaked or saturated with water or the rate of rainfall exceeds the infiltration capacity of the soil, the rainwater begins to flow on the surface of land to low lying areas, ditches, channels, streams, and rivers. Rainwater that flows off a site is defined as storm water runoff. When a site is in a natural condition or is undeveloped, a larger percentage of rainwater infiltrates into the soil and a smaller percentage flows off the site as storm water runoff.

The infiltration and runoff process is altered when a site is developed. Buildings, sidewalks, roads, and parking lots introduce asphalt, concrete, and roofing materials to the landscape. These materials are relatively impervious, which means that they absorb less rainwater. As impervious surfaces are added to the ground conditions, the natural infiltration process is reduced. As a result, the volume and rate of storm water runoff increases. The increased volumes and rates of storm water runoff can result in flooding if adequate storm drainage facilities are not provided.

The project would create approximately 170,722 square feet of new impervious surface on a site that previously contained zero square feet of impervious surface area. The project would be

served by existing storm drainage infrastructure. Wastewater, water, and storm drainage lines would be connected via existing lines along the Adams Lane right-of-way. The project will include an onsite stormwater treatment area and drainage management areas to manage water runoff. Stormwater treatment and drainage management would include a bioretention area and grading infrastructure strategies that will ensure adequate drainage. Therefore, project development would not result in a substantial increase in the rate of amount of surface runoff in a manner which would result in flooding nor would it create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage system.

For the proposed project, two bio-retention areas throughout the project site are proposed that would channel site stormwater to a catch basin at the southeast corner of the site. Flows will percolate through the basin before being released into the stormdrain system.

A long-term maintenance plan is needed to ensure that all proposed stormwater treatment BMPs and facilities function properly. Should the proposed water quality treatment facilities not be maintained properly, a potentially significant impact could occur with respect to creating or contributing runoff water that would exceed the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff.

If left uncontrolled, the operation of the proposed project could result in the potential for pollutants to wash down and potentially drain into Marsh Creek. However, 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. These measures would include a bioretention area to treat stormwater runoff before allowing it to proceed into the drainage management area.

The proposed project would not substantially alter the existing drainage pattern of the site or the area. Therefore, with implementation of the following mitigation measure, the proposed project would result in **less than significant** impacts related to the alteration of the existing drainage pattern of the site or area, or 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.

Mitigation Measure(s)

Implement Mitigation Measure HYD-2

Responses c.iv): Less than Significant. According to the Flood Insurance Rate Map Panel: 06013C0354G, the project site is not located within a designated flood zone. Therefore, a **less than significant** impact would result from implementation of the proposed project with respect to placing structures within a 100- year floodplain, which would impede or redirect flood flows.

Response d): Less than Significant. Tsunamis are defined as sea waves created by undersea fault displacement. A tsunami poses little danger away from shorelines; however, when a tsunami reaches the shoreline, a high swell of water breaks and washes inland with great force. Historic records of the Bay Area used by one study indicate that nineteen tsunamis were recorded in San Francisco Bay during the period of 1868-1968. Maximum wave height recorded at the Golden Gate tide gauge (where wave heights peak) was 7.4 feet. 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 are not expected to result. This is a less than significant impact.

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, risks from seiches and adverse impacts are not expected to result. This is a **less than significant** impact.

XI. LAND USE AND PLANNING - Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a): No Impact. As noted in the General Plan, the City of Brentwood has planned for orderly, logical development that supports compatibility among adjacent uses. The General Plan goals seek to retain the character of existing communities and ensure that future land uses are compatible with existing uses. Currently, there are no existing structures on the site, and the site is surrounded by residential neighborhoods. The proposed project, which includes residential development, would not physically divide an established community due to the nature of the site, and its location within city limits. Therefore, the project would have **no impact** related to physically dividing an established community.

Responses b): Less than Significant. The Brentwood General Plan identifies the project site for Residential Very Low Density land uses. The Residential Very Low Density land use requires densities between 1.1 and 3 du/ac. The proposed project consists of the development of 51 single-family residential units on 16.82 acres, which results in approximately 3.11 du/ac, which is within the General Plan density requirements (inclusive of the Density Bonus, as described in greater detail in the project description), provided the applicant receives approval from the City Council of its request to develop above the mid-range. Therefore, the proposed project is consistent with the existing General Plan land use designation. The potential for the project to result in a significant impact due to a conflict with policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect is addressed throughout this Initial Study, on a topic by topic basis. As demonstrated in this report, the project would have a **less than significant** impact related to conflicting with applicable land use plans, policies, regulations, or surrounding uses.

XII. MINERAL RESOURCES -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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?			X	
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?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. The 2014 Brentwood General Plan Update EIR does not identify significant mineral resources within the area. In addition, Figure 3.6-6 in the 2014 Brentwood General Plan Update EIR does not show an existing active oil and gas well on the project site. Therefore, the impact regarding the loss of availability of a known mineral resource that would be of value to the region, as well as 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, would be **less than significant**.

XIII. NOISE -- WOULD THE PROJECT RESULT IN:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

BACKGROUND

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz). Noise is a subjective reaction to different types of sounds.

Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60 dBA sound. Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise. The day/night average level (Ldn) is based upon the average noise level over a 24-hour day, with a +10- decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source,

depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

Railroad Noise

Union Pacific Railroad Line (UPRR) – Currently Inactive

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, there is the potential that future use of the line could be used for commuter passenger service or future freight service.

Rail operations associated with light rail passenger service is 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, it was 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), N_{eq} 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 trains between daytime, evening and nighttime hours, the Ldn would be 67 dB at 100 feet. The closest UPRR track is located over ½ mile southwest of the site; therefore, railroad noise would not impact the proposed project.

Significance Criteria

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

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 City of Brentwood General Plan. Specifically, based upon Table N-1 of the City of Brentwood General Plan, residential uses are considered normally acceptable in ambient noise environments up to 60 dBA L_{dn}, and conditionally acceptable in noise environments up to 75 dBA L_{dn}. However, policy N-1 limits exterior noise levels to 65 dBA L_{dn} for new residential uses adjacent to State Route 4 corridor, major arterials within Brentwood, and noise from the UPRR. The City of Brentwood also establishes an interior noise level criterion of 45 dBA L_{dn} for residential uses.

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant with Mitigation. Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels at noise-sensitive land uses.

An Acoustical Study, dated January 6, 2022, was prepared by Charles M. Salter Associates (Salter) for the proposed project in order to determine in detail the potential for noise impacts to persons on the project site (see Appendix H). The purpose of the study was to quantify the existing and future noise levels at the project site and compare the noise levels to applicable standards. It should be noted that the Acoustical Study was originally prepared in April 2020 during the State of California's COVID-19 shelter-in-place mandates, which drastically changed behavior and the traffic volumes on adjacent roadways. Additionally, in April 2020, Marsh Creek Elementary School to the northwest of the site had ceased on-site operations. The Acoustics Study was updated in April 2021, and again in January 2022, As of April 2021, Marsh Creek Elementary School has resorted to a hybrid learning schedule, where the school separates children into AM and PM groups for four hours of in-person instruction four-days a week with both groups remote learning every Wednesday. Therefore, out of an abundance of caution, Salter has not made on-site measurements. Instead, Salter utilized the existing noise data for nearby streets in the City of Brentwood General Plan EIR, focusing on Lone Oak Road, Adams Lane, and Grant Street, and conversations with the City Planning staff to estimate the existing noise levels. The use of this existing roadway noise data from the General Plan EIR is considered a better representation of existing traffic noise levels, given that the data was gathered pre-pandemic, and better represents "normal" traffic conditions on nearby roadways. A summary of the noise levels is provided in Table 7.

Table 7: Summary of Existing Background Noise Measurement Data

Street Name	*Estimated Sound Level (dB)*	*Distance*	*Source of Data*
Lone Oak Road	59	50 feet	City Planning Staff Phone Call
Adams Lane	70	50 feet	General Plan EIR
Grant Street	72	50 feet	General Plan EIR

Source: Charles M. Salter Associates – 2020

Based on the General Plan EIR data and City-provided volumes, Salter calculated the expected DNL at the various facades and elevations. Because Salter did not yet have projected future traffic

volumes for the roadways, they have added 1 dB to the measured noise level to account for future traffic increases[5].

Operational Noise Increases at Existing Sensitive Receptors

The proposed project is located in an area consisting predominately of residential, public/quasi-public, and school uses. The project involves the development of 51 detached single-family homes and associated infrastructure. Residential land uses do not generate significant noise levels beyond those associated with typical residential activities (lawn mowers, car doors, voices, etc.), which would be compatible with the adjacent existing residential uses.

Traffic Noise Increases at Existing Sensitive Receptors

Traffic generated by the proposed project has the potential to contribute to roadway noise levels in the vicinity of the project site and throughout other areas of the City. Given the fact that the 2014 General Plan designated the project site for R-VLD development, and the proposed project is consistent with the residential densities allowable with the R-VLD designation, the increase in traffic noise resulting from additional vehicle traffic generated from the proposed project has already been evaluated and considered in the General Plan Update EIR analysis. Therefore, no traffic study was required for the project and no substantial increases in traffic noise are predicted.

Traffic Noise at New Sensitive Receptors – Interior Areas

Typical single-family residential construction with dual glazed windows provide about 25 dBA of noise reduction with windows closed. Therefore, standard dual glazed windows would likely suffice to reduce noise to the City's goal in most instances. Using the March 13, 2020 drawings from the applicant that show lot plans and elevations, Salter calculated the window and exterior door sound transmission class (STC) ratings of up to STC 28 would be needed to meet the city's indoor DNL 45 dB criterion. However, the exact window and door sound ratings would depend on the final design of the buildings, including the size of windows/doors and composition of exterior walls. In addition, most dwelling units would need to have windows in their closed position to meet the indoor noise standard. Therefore, the dwelling units would need an air conditioning or ventilation system in order to provide a habitable environment and meet current State Building Code ventilation requirements. Impacts resulting from interior noise levels exceeding the threshold of significance due to exterior traffic noise would be considered **potentially significant**.

Traffic Noise at New Sensitive Receptors – Exterior Areas

Policy N 1-2 of the City's Noise Element requires that new single-family residential projects meet acceptable exterior noise levels. According to the City, a Ldn of 60 dBA or less is considered "normally acceptable." According to Salter's Acoustical Report, noise levels at the backyards closest to Adams Lane and Grant Street are estimated to reach as high as 66 dB and 63 dB, respectively. These levels are considered to be "Conditionally Acceptable." Therefore, exterior

[5] The California Department of Transportation assumes a traffic volume increase of three-percent per year, which corresponds to a 1 dB increase in DNL over a ten-year period

noise control measures would be required to ensure that future residents are not exposed to exterior noise levels exceeding City standards.

To reduce noise levels, Salter recommended a continuous six-foot-high solid fencing with a minimum surface weight of 3 psf (e.g., ship-lapped 1x wooden boards, marine-grade plywood, CMU, etc.) be built as a barrier to block noise along the backyards of the homes closest to Adams Lane and Grant Street. According to the applicant's landscaping plans, the applicant is proposing a six-foot-high perimeter wall along backyards of the lots backing up to Adams Lane and the northern boundary of the project site (i.e., the lots closest to Grant Street). Implementation of the six-foot high perimeter wall would reduce noise levels to "Normally Acceptable" conditions ensuring that the future residences would not be exposed to exterior noise levels exceeding City standards.

Construction Activities

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. Most of the building construction would occur at distances of 50 feet or greater from the nearest residences. Construction noise associated with streets would be similar to noise that would be associated with public works projects, such as a roadway widening or paving projects.

Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration, and would likely occur primarily during daytime hours.

Construction activities are conditionally exempt from the Noise Ordinance during certain hours. Construction activities are exempt from the noise standard from 6 AM to 8 PM Monday through Friday, and from 7 AM to 8 PM on Saturdays and Sundays.

Although construction activities are temporary in nature and would likely occur during normal daytime working hours, construction-related noise could result in sleep interference at existing noise-sensitive land uses in the vicinity of the construction if construction activities were to occur outside the normal daytime hours. Therefore, impacts resulting from noise levels temporarily exceeding the threshold of significance due to construction would be considered **potentially significant**.

Conclusion

Implementation of the following mitigation measures would ensure that future residences at the project site would not be subject to exterior and interior noise levels in excess of the City's standards, and ensure that the project would not result in the generation of significant construction noise impacts, resulting in a **less than significant** impact.

Mitigation Measure(s)

Mitigation Measure NOI-1*: Prior to issuance of buildings permits for any residential unit, the construction drawings shall include a suitable form of forced-air mechanical ventilation for each unit, 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.*

Mitigation Measure NOI-2: *Prior to issuance of building permits, a qualified acoustical consultant shall review the final set of construction documents to calculate expected interior noise levels as required by the City of Brentwood to confirm that the design results in interior noise levels reduced to 45 dBA CNEL or lower. Results of the analysis, including the description of the necessary noise control treatments, shall be submitted to the City along with the building plans and approved prior to issuance of a building permit. Potential measures could include, but would not be limited to, incorporation of noise insulating building materials such as windows or exterior doors with STC ratings of up to STC 28. The exact window and door sound ratings would depend on the final design of the buildings including the size of windows/doors and composition of exterior walls.*

Mitigation Measure NOI-3: *Prior to approval of project improvement plans, the improvement plans for the proposed project shall show a perimeter wall in the locations shown in the project landscaping plans prepared by vanderToolen Associates (dated January 6, 2022), per the approval of the City Engineer. Other types of barrier may be employed but shall be reviewed by an acoustical engineer prior to being constructed to ensure compliance with General Plan noise level requirements.*

Mitigation Measure NOI-4: *Construction activities shall be limited to the hours set forth below:*

Monday-Friday 7:00 AM to 6:00 PM
Saturday 8:00 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 applicant/developer for review and approval of the Community Development Director prior to issuance of grading permits. Exceptions to allow expanded construction activities shall be reviewed on a case-by-case basis as determined by the Chief Building Official and/or City Engineer.

Mitigation Measure NOI-5*: The project contractor shall ensure that the following construction noise BMPs are met on-site during all phases of construction:*

- *All equipment driven by internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specifications. Mobile or fixed "package" equipment (e.g., arc welders, air compressors) shall be equipped with shrouds and noise- control features that are readily available for that type of equipment.*

- *All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.*
- *The construction contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.*
- *At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from residences.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *Construction staging areas shall be established at locations that would create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction activities, to the extent feasible.*
- *Construction site and access road speed limits shall be established and enforced during the construction period.*
- *The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.*
- *Project-related public address or music systems shall not be audible at any adjacent receptor.*
- *Neighbors located adjacent to the construction site shall be notified of the construction schedule in writing.*
- *The construction contractor shall designate a "noise disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall be responsible for determining the cause of the noise complaint (e.g., starting too early, poor muffler, etc.) and instituting reasonable measures as warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.*

Construction noise BMPs 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.

Response b): Less than Significant. Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by several factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. The threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). One-half this minimum threshold or 0.1 in/sec p.p.v. is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is noted as 0.1 in/sec p.p.v.

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and roadway construction occur.

Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located approximately 25 to 50 feet or further from the project site. 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.

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and parking lot construction occur. Table 8 shows the typical vibration levels produced by construction equipment.

TABLE 8: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

Type of Equipment	Peak Particle Velocity at 25 feet (inches/second)	Peak Particle Velocity at 50 feet (inches/second)	Peak Particle Velocity at 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 (Less than 0.20 at 26 feet)	0.074	0.026

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

Table 8 data indicates that construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at distances of 26 feet. Sensitive receptors which could be impacted by

construction related vibrations, especially vibratory compactors/rollers, are located approximately 26 feet, or further, from typical construction activities. At these distances 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. As a result, short-term groundborne vibration impacts would be considered **less than significant** and no mitigation is required**.**

Response c): No Impact. The project site is not located near an existing airport and is not within an existing airport land use plan. The nearest airport, Funny Farm Airfield, is a private airfield located approximately 3.0 miles east of the project site. Although aircraft-related noise could occasionally be audible at the project site, noise would be extremely minimal. Exterior and interior noise levels resulting from aircraft would be compatible with the proposed project. Therefore, there would be **no impact**.

XIV. POPULATION AND HOUSING -- Would the project:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. The proposed project would directly result in population growth in the area through the proposed construction of 51 single family dwelling units, generating approximately 164 additional residents (based on 3.22 persons per household[6]). Resulting growth from the proposed project is consistent with the General Plan Land Use designation for the project site, and would fall within the anticipated population growth levels analyzed in the Brentwood General Plan EIR (2014). As discussed below, the utility systems (e.g., water and sewer) serving the project could accommodate the additional demands created by the project and the project includes infrastructure improvements needed to connect the project to these existing utility systems. In addition, as discussed below in Section XV (Public Services), public service providers such as police and fire, could accommodate the additional demands for service created by the project. As a result, the impact would be **less than significant** with respect to inducing population growth because the demands resulting from said growth could be accommodated by existing utility systems and service providers.

Responses b): No Impact. There are no existing homes or residences located on the project site. There is **no impact**.

[6] City of Brentwood. *2014 Brentwood General Plan Update EIR* [pg. 3.10-32]. July 22, 2014.

XV. PUBLIC SERVICES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?		X		
d) Parks?		X		

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. The proposed project is located within the jurisdiction of the East Contra Costa Fire Protection District (ECCFPD). In accordance with ECCFPD efforts to reorganize due to budgetary constraints and the failure of the recent parcel tax, the district employs 34 personnel: 3 Battalion Commanders, 10 Captains, 10 Engineers, and 11 Firefighters. The District currently staffs three stations, one station in Oakley, one in Discovery Bay, and one in Brentwood.

- Station 52, at 201 John Muir Parkway, Brentwood
- Station 59, at 1685 Bixler Road, Discovery Bay
- Station 93, at 530 O'Hara Avenue, Oakley

The City of Brentwood is served primarily by Station 52. Station 52 is located roughly 2.57 miles southwest of the project site.

The Brentwood General Plan includes nine policies and four actions (Policies CSF 1-1 through 1-3, and 4-1 through 4-6, and Actions CSF 1a, and 4a-c) to ensure that fire protection services are provided in a timely fashion, are adequately funded, are coordinated between the City and appropriate service agency, and that new development pays their fair share of services. Among the action items included in the Brentwood General Plan that are applicable to the project are:

- Action CSF 1a: Requiring new development to pay their fair share fees of the cost of on and off-site community services and facilities;

- Action CSF 4a: Continue to enforce the California Building Code and the California Fire Code to ensure that all construction implements fire-safe techniques, including fire resistant materials, where required;
- Action CSF 4b: As part of the City's existing development review process for new projects, the City would continue to refer applications to the ECCFPD for determination of the project's potential impacts on fire protection services. Requirements would be added as conditions of project approval, if appropriate.

The project would comply with these General Plan actions. For example, the project would be required to pay for single-family fire impact fees that support the construction of new fire facilities in the amount of approximately $1,318 per new single-family residence prior to building permit issuance. In addition to providing additional revenue for fire facilities, the project would be required to comply with all ECCFPD standard conditions of approval related to provision of fire flow, roadway widths, etc. The project is also subject to the City of Brentwood residential life safety sprinkler requirements set forth in Section 15.64.010 of the Municipal Code.

ECCFPD currently has adequate capacity to provide fire protection services for the proposed project without inducing demand for an additional fire station[7]. Additionally, the 2014 Brentwood General Plan Update EIR concluded implementation of the General Plan would result in a less than significant impact related to the provision of public services throughout the City.[8] The project is consistent with the General Plan designation for the site; therefore, the additional demand for fire protection services resulting from the proposed project has already been evaluated in the General Plan EIR. Given the project's compliance with the relevant General Plan policies and actions related to fire service, the impact from the proposed project, consistent with the General Plan EIR determination, would be **less than significant** regarding the need for the construction of new fire protection facilities which could cause significant environmental impacts.

Response b): Less than Significant. The City of Brentwood Police Department would provide police protection services to the project site. Currently, the Brentwood Police Department provides law enforcement and police protection services throughout the City. Established in 1948, the Brentwood Police Department is a full service law enforcement agency that is charged with the enforcement of local, State, and Federal laws, and with providing 24-hour protection of the lives and property of the public. The Police Department functions both as an instrument of public service and as a tool for the distribution of information, guidance, and direction.

The Brentwood Police Department services an area of approximately 14 square miles. As of November 2019, the Department had 62 sworn police officers and another 30 civilian support

[7] Personal Communication with Steve Aubert, City of Brentwood Fire Department Fire Marshal. February 24, 2020.
[8] City of Brentwood. *2014 Brentwood General Plan Update EIR* [pg. 3.12-23]. July 22, 2014

staff. In addition to the permanent staff, the Department had approximately 20 volunteers who are citizens of the community and assist with day to day operations.

The department is located at 9100 Brentwood Boulevard, approximately 2.54 miles southeast from the project site.

The Brentwood General Plan includes eight policies and five actions (Policies CSF 1-1 through 1-3, and 3-1 through 3-5; and Actions CSF 1a and 3a-d) to ensure that police protection services are provided in a timely fashion, are adequately funded, are coordinated between the City and appropriate service agency, and that new development pays their fair share of services. Among the policies and actions items included in the Brentwood General Plan that are applicable to the project are:

- Policy CSF 3-4: Emphasize the use of physical site planning as an effective means of preventing crime. Open spaces, landscaping, parking lots, parks, play areas, and other public spaces should be designed with maximum feasible visual and aural exposure to community residents.
- Policy CSF 3-5: Promote coordination between land use planning and urban design through consultation and coordination with the Police Department during the review of new development applications.
- Action CSF 1a: Requiring new development to pay their fair share fees of the cost of on and off-site community services and facilities;
- Action CSF 3c: As part of the development review process, consult with the police department in order to ensure that the project design facilitates adequate police staffing and that the project addresses its impacts on police services.

The project applicant will be required by the City to comply with these policies and actions. In addition, the City also has Community Facilities Districts which generate special tax revenue that can be used for a variety of services, and which are currently being allocated primarily towards public protection and safety provided by the Brentwood Police Department. These funds amount to approximately $1,595 per year per home and could be used to fund new facilities, and maintain existing facilities and equipment, and pay for salaries and benefits.

Therefore, consistent with the General Plan EIR conclusion related to governmental facility impacts resulting from General Plan build-out, the project would have a **less than significant** impact regarding the need for the construction of new police protection facilities which could cause significant environmental impacts.

Response c): Less than Significant with Mitigation. The project site is located within the Liberty Union High School District (LUHSD) and the Brentwood Union School District (BUSD).

LUHSD includes four comprehensive high schools: Liberty High, Freedom High, Heritage High, and Independence High. In addition, the LUHSD includes one continuation high school, La Paloma. According to the LUHSD, the five high schools have a capacity of 6,840. With a total enrollment of 8,219 students, the high schools exceed capacity by 1,379 students. According to a

Facility Needs Assessment prepared for the LUHSD in April of 2016, LUHSD student generation factor for grades nine through 12 is 0.1436 for single-family detached units. With 51 single-family units, the project is expected to generate approximately 7 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. In 2019-2020 school year, the BUSD had a K-5th grade enrollment of 6,986 with K-5th capacity of 6,391. The District's 2019 6-8th grade enrollment is 2,386 with a 6-8th grade capacity of 2,624[9]. Therefore, the District has excess capacity for another 238 6-8th, but is over capacity for grades K-5th by approximately 595 students. Utilizing the District's current Student Generation Rates, the 51 units proposed for the proposed project would introduce approximately 16 new K-6th students (51 * 0.32) to the District and approximately 6 new 7-8th grade students (51 * 0.12). Available capacity exists to accommodate 7-8th students anticipated from the project, but not the new K-6th grade students.

Because the LUHSD is already over capacity; and the BUSD is over capacity for grades K-5th, adding students to the districts may result in further overcrowding and compromising programs. Therefore, the project would have a potentially significant impact regarding the need for the construction of new school facilities which could cause significant environmental impacts.

Under state law, the project would be subject to school facility impact fees to mitigate any potential project-related increases in student enrollment. The LUHSD and BUSD have established the appropriate fee for all development in the City of Brentwood. This fee established by the Districts, following the requirements of State law, is the fair share funding that the City will require of this development, if it is approved. 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)). Pursuant to Section 65995(h) of the California Government Code, the payment of school fees is considered full and complete mitigation for impacts on school facilities. Consistent with State law, implementation of the following mitigation measure would reduce the impacts to a **less than significant** level.

Mitigation Measure(s)

Mitigation Measure PUB-1: *Prior to building permit issuance for any residential development, the developer shall submit to the Community Development Department proof that the appropriate school mitigation fees have been paid pursuant to Proposition 1A/SB 50.*

Response d): Less than Significant with Mitigation. The proposed project includes the construction of 51 residences. Applying the Brentwood standard of 3.22 residents per dwelling unit, the proposed project would create housing for approximately 164 additional residents. The Brentwood General Plan calls for 5 acres of park per 1,000 residents. The proposed project would thus require approximately 0.82 acres of park space for these additional residents. However, the

[9] Cooperative Strategies. May 2020. Residential and Commercial/Industrial Development School Fee Justification Study: Brentwood Unified School District.

proposed project does not include active park space as called for in the General Plan. Therefore, the project could result in a **potentially significant** impact.

Implementation of the following mitigation measure would ensure that the City requirements are satisfied, resulting in a **less than significant** impact.

Mitigation Measure(s)

Mitigation Measure PUB-2: *Prior to building permit issuance, the project applicant shall pay the proportional required park in-lieu fees as determined by the Parks and Recreation Department and the Community Development Department, in accordance with the City's Development Fee Program and Brentwood Municipal Code Section 16.150.020.B.*

XVI. RECREATION

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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?		X		
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?		X		

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant with Mitigation. As explained above in Question 'd' of the Public Services section, the proposed project does not include sufficient park land acreage for the 51 residential units. As a result, in-lieu fee payments would be required to meet the City's park land requirements. Therefore, the proposed project's impact related to the provision of adequate recreational facilities would be **potentially significant**.

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

Mitigation Measure(s)

Implementation of Mitigation Measure PUB-2.

XVII. TRANSPORTATION -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Conflict with an applicable program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a), b): Less than Significant Access to the site would be via off of Adams Lane. Adams lane is a north-south street in northern Brentwood that currently terminates at Brownstone Road to the north and O'Hara Avenue to the south. This route generally has two lanes in each direction, turn lanes at intersections and sidewalks. The posted speed limit is 25 mph.

The project would not have any detrimental effects on the existing and planned bicycle and pedestrian network in Brentwood, nor would it conflict with any plans or planned improvements to these systems. The project is a single family neighborhood surrounded by similar residential uses, and as such, the vast majority of people travelling to and from the site would travel in their vehicles. However, it is possible that residents would travel to and from via bicycle or on foot.

Sidewalks exist on the southbound travel lane on Adams Lane, immediately west of the project site. Enhanced street frontage improvements will be provided along Adams Lane that will facilitate pedestrian continuity. As such, the project would not substantially degrade pedestrian conditions.

Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Per Section 15064.3, analysis of vehicle miles traveled (VMT) attributable to a project is the most appropriate measure of transportation impacts. While changes to driving conditions that increase intersection delay are an important consideration for traffic operations and management, the method of analysis does not fully describe environmental effects associated with fuel consumption, emissions, and public health. Section 15064.3(3) changes the focus of transportation impact analysis in CEQA from measuring impact to drivers to measuring the impact of driving.

A VMT Analysis, dated January 11, 2022, (see Appendix I) was prepared for the project by TJKM Transportation Consultants (TJKM). The purpose of the VMT Analysis is to provide an analysis of

the expected VMT that would be generated by the proposed residential development. As the City of Brentwood does not currently have an adopted policy document outlining VMT standards, study requirements, or methodology for conducting project VMT analysis, TJKM has based this analysis on requirements adopted by the Contra Costa Transportation Authority (CCTA) in July 2020 as an amendment to the Growth Management Plan (GMP).

TJKM developed estimated project trip generation for the proposed project based on published trip generation rates from the ITE publication *Trip Generation (10th Edition).* TJKM used published trip rates for the ITE land use Single Family Detached Housing (ITE Code 210) for this project. The project is expected to generate 481 daily trips, including 38 a.m. peak hour trips (10 inbound trips, 28 outbound trips) and 50 p.m. peak hour trips (32 inbound trips, 18 outbound trips.

PROJECT VEHICLE MILES TRAVELED

The OPR Technical Advisory (December 2018) provides guidance to analysts and local jurisdictions for implementing VMT as a metric for determining the transportation impact for land use projects. The OPR guidelines state that for analysis purposes, "VMT" refers to automobile VMT, specifically passenger vehicles and light trucks. Heavy truck traffic is typically excluded. The adopted CCTA VMT analysis methodology provides specific procedures and thresholds for land use projects within Contra Costa County.

Screening Criteria

The CCTA VMT methodology provides standards for identifying which projects should be expected to prepare a detailed VMT analysis, based on characteristics such as their size, mix of uses, proximity to transit, or location. These screening criteria are used to quickly determine if a proposed project should be expected to prepare a detailed VMT analysis, as screened out projects can be presumed to have a less-than-significant impact on VMT. Projects are considered small if they would construct no more than 20 residential units or 10,000 sq. ft. of non-residential space. The project would construct 51 residential units, exceeding the screening criteria for size. Existing residential VMT in the project location must therefore be established in order to determine whether the project is located in a low VMT area, as other screening criteria do not apply. If a project does not meet any screening criteria, it would typically be required to prepare a detailed VMT analysis.

Under the CCTA VMT methodology, a low VMT area is defined as a city or unincorporated portion within one of the CCTA subregions where home-based VMT per resident is at least 15 percent below the countywide or where the commute VMT per employee is at least 15 percent below the regional average. A conservative reading of the methodology would indicate that when the citywide average VMT per resident is above the countywide average, projects cannot be screened out based on location, and a VMT analysis must be completed. In such cases, the appropriate significance thresholds based on countywide or regional average would be applied. The methodology also permits the applicable average VMT for the subject municipality or

unincorporated CCTA subregion to be utilized instead of the countywide or regional average, if it is less stringent.

Under the residential use classification outlined in the OPR Technical Advisory, and the CCTA VMT methodology, home-based VMT includes all trips that begin or end at a residence, and home-work (commute) VMT includes trips between a residence and an employment-generating use. The CCTA travel demand model generates weekday VMT per capita by traffic analysis zone (TAZ) within Contra Costa County and throughout the Bay Area, for home-based VMT per resident and commute VMT per employee. For the year 2020, the Contra Costa County average home-based VMT per capita generated by the CCTA travel demand model is 19.78. The Brentwood average is 29.6, and the East Subarea average is 24.9, both higher than the countywide average. Using a conservative reading of the CCTA screening criteria, the proposed project is not located in a low-VMT area and would require a VMT analysis to determine if it has a significant VMT impact.

Existing VMT Generated Per Resident

The project site east of Adams Lane is within the boundaries of three existing TAZs (#30326, #30327, and #30328), with the majority of the project area located within TAZ #30327. There is a small amount of geographic overlap between the project boundaries and the other two TAZs, and it is expected that this is a minor misalignment between TAZ boundaries and actual roadways, and that the site would be entirely assigned to TAZ #30327 in future model revisions. Within these three TAZs, the majority of residential units are part of subdivisions similar to the proposed project: predominantly single family homes, with a small number of duplexes. In consultation with City staff, TJKM used a weighted average of all three TAZs to establish the existing residential VMT at the project location. For this TAZ, based on model simulations for the year 2020, the existing home-based VMT per resident is 19.1 miles. Table 9 shows a summary of the TAZ data for this location. A map view showing these TAZ boundaries is included in Appendix I.

Table 9: Year 2020 VMT Generation

TAZ #	*Description*	*Population*	*Home Based VMT*	*Home Based VMT per Capita*
30326	Bounded by Gracie Ln., Marsh Creek, and TAZ #30328 (approximately following O'Hara Ave.)	120	2,930	24.4
30327	Bounded by Adams Lane, Grant Street, Gracie Lane, and Marsh Creek	561	10,740	19.1
30328	Bounded by Grant St., railroad tracks, Sand Creek Rd., and TAZs #30326/30327 (approximately following Adams Ln. and O'Hara Ave.)	568	12,710	22.4
Total		**1,249**	**26,380**	**21.12**

Source: TJKM, 2022. CCTA travel demand model, year 2020. Model revision 2016, Kittelson & Associates.

Project-Related Residential VMT

The CCTA VMT methodology requires that baseline and baseline plus project scenarios be evaluated, using the most recent baseline CCTA travel demand model. In general, the baseline plus project scenario would be generated by adding the project to the appropriate TAZ and re-running the model simulations. However, the methodology states that for single-use projects that are very similar to the existing uses in the TAZ, "the analyst may conclude that the project generated home-based VMT per capita or home-work VMT per worker will be the same as the existing VMT per capita or per worker in that TAZ," and a new travel demand model run with the project is not required. This is the case for the proposed project, as noted above. It is expected that the project's home-based VMT per capita would be 21.12, the same as the existing VMT per capita in the project location.

Although the proposed project is located entirely within the Brentwood city limits, the travel demand model data incorrectly identifies it as being in unincorporated Contra Costa County. As such, VMT generated at the project location was compared to the average VMT for both the City of Brentwood and the East Subarea, in addition to the countywide average.

For residential projects, CCTA establishes a significance threshold of 15 percent below the subject municipality (or unincorporated CCTA subregion outside of municipalities) average residential VMT, or below the countywide average VMT, whichever is less stringent. The Contra Costa County average home-based VMT per capita generated by the CCTA travel demand model is 19.78. The City of Brentwood average is 29.6, and the East Subarea average is 24.9, both higher than the countywide average and thus less stringent. The corresponding screening thresholds, 15 percent

below the average, are 25.16 in the City of Brentwood and 21.16 in the East Subarea. These are both higher than the existing VMT at the project location. Based on CCTA significance thresholds, the project would produce a **less-than-significant impact** on VMT.

CONCLUSION

The proposed development of 51 homes on Adams Lane in Brentwood is expected to generate 481 daily vehicle trips, including 38 a.m. peak hour trips and 50 p.m. peak hour trips. Based on the existing residential VMT generated by other similar homes surrounding the project location, the project is expected to generate VMT per resident that is at least 15 percent below the Brentwood citywide average. Based on adopted CCTA thresholds, the project would produce a less-than-significant impact to VMT.

In summary, impacts related to conflicts with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, would be less than significant. Additionally, based on the above, the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) and would be **less than significant**

Response c): Less than Significant. No site circulation or access issues have been identified that would cause a traffic safety problem/hazard or any unusual traffic congestion or delay that could impede emergency vehicles or emergency access. Parking for the project would be provided by garages and driveways for each residence, and additional on street parking options available for emergency vehicles. The site access, on-site circulation, and parking is adequate. The project will be required to provide a turnaround (i.e., cul-de-sac or hammer head) at the terminus of Gracie Lane, which is a condition of approval by the City in order to maintain solid waste service levels and emergency response times to the neighborhood surrounding the project. Therefore, the project will not increase hazards due to a geometric design feature or incompatible use. In addition, the project will undergo a comprehensive site plan review by the City. This impact would be **less than significant**.

Responses d): **Less than Significant.** Access to the site would be via off Adams Lane. All accesses would be designed to City standards that accommodate turning requirements for fire trucks, facilitating entry by emergency vehicles into the project site. Implementation of the proposed project would have a less than significant impact related to emergency access, and would not interfere with an emergency evacuation plan. Therefore, the impact is **less than significant.**

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?		X		
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.		X		

Background

Assembly Bill 52 (AB 52) requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. The City of Brentwood received requests from two California Native American tribes to be informed through formal notification of proposed projects in the City's geographic area. On October 5, 2020, tribal notification letters were sent via certified mail informing the tribes of the proposed project. No requests for consultation were received from either tribe with respect to this project.

RESPONSES TO CHECKLIST QUESTIONS

Responses a.i), a.ii): Less than Significant with Mitigation. The City of Brentwood General Plan and EIR do not identify the site as having prehistoric period cultural resources. Additionally, there are no unique cultural resources known to occur on, or within the immediate vicinity of the project site. The site has previously been used for agricultural uses. No instances of cultural resources or human remains have been unearthed on the project site. However, as discussed in *Section V* (Cultural Resources), the project site has the potential for the discovery of prehistoric, ethnohistoric, or historic archaeological sites that may meet the definition of Tribal Cultural Resources. Although no Tribal Cultural Resources have been documented in the project site, the

project is located in a region where cultural resources have been recorded and there remains a potential that undocumented archaeological resources that may meet the Tribal Cultural Resource definition could be unearthed or otherwise discovered during ground-disturbing and construction activities. Examples of significant archaeological discoveries that may meet the Tribal Cultural Resources definition would include villages and cemeteries.

Due to the possible presence of undocumented Tribal Cultural Resources within the project site, construction-related impacts on tribal cultural resources would be potentially significant. Implementation of Mitigation Measures CUL-1 and CUL-2 would require appropriate steps to preserve and/or document any previously undiscovered resources that may be encountered during construction activities, including human remains. Implementation of these measures, in addition to Mitigation Measure TRI-1 would reduce this impact to a **less than significant** level.

Mitigation Measure(s)

Implement Mitigation Measures CUL-1 and CUL-2.

Mitigation Measure TRI-1: *If cultural resources are discovered during project-related construction activities, all ground disturbances within a minimum of 50 feet of the find shall be halted until a qualified professional archaeologist can evaluate the discovery. The archaeologist shall examine the resources, assess their significance, and recommend appropriate procedures to the lead agency to either further investigate or mitigate adverse impacts. If the find is determined by the lead agency in consultation with the Native American tribe traditionally and culturally affiliated with the geographic area of the project site to be a tribal cultural resource and the discovered archaeological resource cannot be avoided, then applicable mitigation measures for the resource shall be discussed with the geographically affiliated tribe. Applicable mitigation measures that also take into account the cultural values and meaning of the discovered tribal cultural resource, including confidentiality if requested by the tribe, shall be completed (e.g., preservation in place, data recovery program pursuant to PRC §21083.2[i]). During evaluation or mitigative treatment, ground disturbance and construction work could continue on other parts of the project site.*

XIX. UTILITIES AND SERVICE SYSTEMS -- WOULD THE PROJECT:

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), and c): Less than Significant. The following discussion addresses available wastewater treatment plant (WWTP) capacity and wastewater infrastructure to serve the project site.

Wastewater Treatment Plant Capacity

The existing WWTP is located on approximately 70 acres of land owned by the City on the north side of Sunset Road and east of Brentwood Blvd. The WWTP has a current treatment capacity of 5 million gallons per day (mgd) and designed to be expandable to an average dry weather flow (ADWF) capacity of 6.4 mgd. In 2017, the ADWF to the WWTP was 3.8 mgd[10].

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 I of the WWTP expansion was completed in 1998-2002, to bring the treatment plant to current levels. Phase II would expand capacity to 7.5 by adding oxidation ditches, secondary clarifiers, filters, and related appurtenances. In January 2020, the City of Brentwood Public Works Department completed the engineering plans for the WWTP Phase II Expansion and solicited bids

[10] Ennis Consulting. 2017. *City of Brentwood Sewer Master Plan [page ii].* August 1, 2017.

for construction. On June 23, 2020, the Brentwood City Council awarded the contract for construction of the WWTP Phase II Expansion with an expected completion date of early 2023. As such, the WWTP would be designed to have sufficient capacity to handle all wastewater flows at build-out per the General Plan.

Buildout of the proposed project would result in the construction of 51 dwelling units generating approximately 164 additional residents (based on 3.22 persons per household). The 2014 Brentwood General Plan Update EIR uses a wastewater generation factor of 85 gallons per day per person of residential development. Therefore, the total wastewater flow from the project site would be about 0.014 MGD. Therefore, the current capacity of the WWTP would be sufficient to handle the wastewater flow from the proposed project. In addition, the proposed project is required to pay sewer impact fees which would contribute towards the cost of future upgrades, when needed. As a result, the proposed project would not have adverse impacts to wastewater treatment capacity.

Wastewater Infrastructure

The 2017 Sewer Master Plan notes a number of existing and future deficient pipes within the sewer collection system requiring the respective parallel pipes or replacement pipes to adequately convey wastewater flows. The wastewater generated by the project would be collected by an internal sewer system, which would connect the existing sewer conveyance line at Lone Oak Road. The existing sewer conveyance line adjacent to the project site is located in the P07 Tributary Area of the 2017 Sewer Master Plan. This tributary area of the Sewer Master Plan does not contain any existing deficient pipes and buildout of the General Plan would not result in future deficient pipes in this tributary area. Therefore, the proposed project would not have adverse impacts to the wastewater infrastructure.

Conclusion

Because the project applicant would pay City sewer impact fees, and adequate long-term wastewater treatment capacity is available to serve full build-out of the project, a **less than significant impact** would occur 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.

Response b): Less than Significant. The following discussion addresses available water supply infrastructure to serve the project site.

Water Supply System

The City of Brentwood has prepared a 2020 Urban Water Management Plan (UWMP) that predicts the water supply available to the City of Brentwood in normal, single-dry, and multiple-dry years out to 2040. The total supply available in 2040 during all scenarios (normal, single-dry, and multiple-dry) well exceeds the projected demand. The future demand projections included in the UWMP are based upon General Plan land uses. The proposed project's use is consistent with the General Plan; therefore, the proposed project's future water demand was considered in

the UWMP. As a result, with respect to the availability of sufficient water supplies to serve the project, the impact from the proposed project would be **less than significant**.

Water Supply Infrastructure

The project would involve the construction of the necessary water infrastructure to serve the proposed neighborhoods. The project site is located within Zone 1 of the City of Brentwood Water Distribution Network[11].The 2017 City of Brentwood Water Master Plan includes a list of existing and future capital improvement projects necessary to support the buildout of the General Plan. The project includes installation of 8-inch water lines within the internal street ROWs which would connect to the existing mains on Adams Lane and Gracie Lane. The existing 12-inch water lines on Adams Lane and Gracie Lane were not identified in the 2017 City of Brentwood Water Master Plan as needing system upgrades to support the development of the General Plan; therefore, the proposed project would not have an adverse impacts to the water supply infrastructure.

Conclusion

Because adequate long-term water supply is available to serve full buildout of the proposed project and the project includes the extension of adjacent water line infrastructure that has sufficient off-site conveyance capacity, the project's impact to water supply and infrastructure would be **less than significant**.

Responses d) and e): Less than Significant. The City's Solid Waste Division, a division of the Public Works Department, provides municipal solid waste collection and transfer services for residential and commercial use within the City of Brentwood. The solid waste from Brentwood is disposed of at Keller Canyon County landfill. Keller Canyon Landfill covers 2,600 acres of land; 244 acres are permitted for disposal. The site 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. As of September 2008, the remaining capacity of the landfill's disposal area is estimated at 60-64 million cubic yards, and the estimated closing date for the landfill is 2050[12]. Because the 2014 Brentwood General Plan Update EIR determined that solid waste capacity is adequate to serve the demand resulting from General Plan build-out and the proposed project's use is consistent with the General Plan designation for the project site; the project's impact to solid waste would be less than significant. This is a **less than significant** impact.

[11] Ennis Consulting. 2017. *City of Brentwood Water Master Plan.* June 1, 2017.
[12] City of Brentwood. *2014 Brentwood General Plan Update EIR* [pg. 3.14-45]. July 22, 2014.

XX. WILDFIRE

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
d) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	

EXISTING SETTING

There are no State Responsibility Areas (SRAs) within the vicinity of the Brentwood Planning Area. The City of Brentwood is not categorized as a "Very High" Fire Hazard Severity Zone (FHSZ) by CalFire. Only a few communities within Contra Coasta County have portions categorized as a "Very High" FHSZ by CalFire. Although this CEQA topic only applies to areas within a SRA or Very High FHSZ, out of an abundance of caution, these checklist questions are analyzed below.

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less Than Significant. The project site will connect to an existing network of City streets. The proposed circulation improvements would allow for greater emergency access relative to existing conditions. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response b): Less Than Significant. The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. The project site is located in an area that is predominately urban, which

is not considered at a significant risk of wildlife. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response c): Less Than Significant. The project includes development of infrastructure (water, sewer, and storm drainage) required to support the proposed single-family use. The project site is surrounded by existing and future urban development. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project would not require the installation or maintenance of infrastructure that may exacerbate fire risk. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response d): Less Than Significant. The proposed project would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the project site and do not result in downstream flooding or major drainage changes. Storm drainage would be conveyed to the on-site bioretention area, which will discharge to the City's storm drainage system. Various storm drainage supporting structures and inlets will be located throughout the project site directing the direction of flow into the bioretention area.

Runoff from the project site currently flows to the existing City storm drains located in Adams Lane. Upon development of the site, stormwater would flow to the on-site bioretention area and/or the existing storm drains in the adjacent roadways. Additionally, the project site is not located within a FEMA designated flood hazard zone. Furthermore, because the site is essentially flat and located in an existing urbanized area of the City, downstream landslides would not occur.

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill). The project site is relatively flat; therefore, the potential for a landslide in the project site is essentially non-existent.

Overall, impacts from project implementation would be considered ***less than significant*** relative to this topic.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE --

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Does the project have the potential to substantially 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. Although relatively unlikely, based upon the current land cover types found on-site, special- status wildlife species and/or federally- or state-protected birds not covered under the ECCCHCP could be occupying the site. In addition, although unlikely, the possibility exists for subsurface excavation of the site during grading and other construction activities to unearth deposits of cultural significance. However, this IS/MND includes mitigation measures that would reduce any potential impacts to less than significant levels. Therefore, the proposed project would have **less than significant** impacts related to degradation of the quality of the environment, reduction of habitat, threatened species, and/or California's history or prehistory.

Response b): Less than Significant. The proposed project in conjunction with other development within the City of Brentwood could incrementally contribute to cumulative impacts in the area. However, mitigation measures for all potentially significant project-level impacts identified for the proposed project in this IS/MND have been included that would reduce impacts to less than-significant levels. As such, the project's incremental contribution towards cumulative impacts would not be considered significant. In addition, all future discretionary development projects in the area would be required to undergo the same environmental analysis and mitigate any potential impacts, as necessary. Therefore, the proposed project would not have any impacts that would be cumulatively considerable, and impacts would be **less than significant**.

Response c): Less than Significant. The proposed project site is located within areas of existing and planned development and is consistent with the land use designation for the site. Due to the

consistency of the proposed land use, substantial adverse effects on human beings are not anticipated with implementation of the proposed project. It should be noted that during construction activities, the project could result in potential impacts related to soil erosion and surface water quality impacts, and noise. However, this IS/MND includes mitigation measures that would reduce any potential impacts to a less-than-significant level. In addition, the proposed project would be designed in accordance with all applicable building standards and codes to ensure adequate safety is provided for the future residents of the proposed project. Therefore, impacts related to environmental effects that could cause adverse effects on human beings would be **less than significant**.

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