

CITY OF PLEASANT HILL

McKISSICK SUBDIVISION PROJECT

INITIAL STUDY/NEGATIVE DECLARATION

Prepared by:

City of Pleasant Hill

APRIL 2019

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1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document contains an initial study, with supporting environmental studies, which concludes that a mitigated negative declaration is the appropriate California Environmental Quality Act (CEQA) document for the proposed McKissick Subdivision Project (project). This Initial Study/Mitigated Negative Declaration has been prepared in accordance with Public Resources Code Section 21000 et seq., and the CEQA Guidelines, California Code of Regulations Section 15000 et seq.

An initial study is conducted by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with CEQA Guidelines Section 15063, an environmental impact report (EIR) must be prepared if an initial study indicates that the project under review may have a potentially significant impact on the environment that cannot be initially avoided or mitigated to a less than significant level. Pursuant to CEQA Guidelines Section 15371, lead agencies may prepare a negative declaration in lieu of an EIR, provided the lead agency provides written documentation that the project would not have a significant environmental effect on the environment.

CEQA Guidelines Section 15070 states that a negative declaration shall be prepared for a project subject to CEQA when:

- a) *The initial study shows there is no substantial evidence, considering the whole record before the agency, that the proposed project may have a significant effect on the environment, or*
- b) *The initial study identifies potentially significant effects, but:*
 - (1) *Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review 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, considering the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.*

If revisions are adopted in the proposed project in accordance with CEQA Guidelines Section 15070(b), including the adoption of mitigation measures included in this document, a mitigated negative declaration can be prepared.

1.2 LEAD AGENCY

The lead agency is a public agency with primary responsibility over a proposed project. In accordance with CEQA Guidelines Section 15051(b) (1), "the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." Based on the criteria above, the City of Pleasant Hill (City) is the lead agency for the project.

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed McKissick Minor Subdivision Project. This document is divided into the following sections:

1.0 Introduction. Provides an introduction and describes the purpose and organization of the document.

2.0 Project Information. Provides general information regarding the project, including the project title, lead agency and address, contact person, brief description of the project location, General Plan land use designation and zoning district, identification of surrounding land uses, and identification of other public agencies whose review, approval, and/or permits may be required. Also listed in this section is a checklist of the environmental factors that are potentially affected by the project.

3.0 Project Description. Includes the project geographic location, environmental characteristics, and a list of permits and approvals, and any applicable federal, state, regional and local governmental review and consultation requirements

4.0 Environmental Checklist. Includes a discussion of resource categories listed in CEQA Guidelines Appendix G. Each subsection describes the environmental setting and includes a description of direct or indirect impacts that would occur as the result of project implementation. Impacts are classified as “no impact,” “less than significant impact,” “less than significant impact with mitigation,” and “potentially significant impact.” The section also includes a statement of Mandatory Findings of Significance as defined in CEQA Guidelines Section 15065.

5.0 References. Lists documents, websites, people, and other sources consulted during document preparation.

1.4 EVALUATION OF ENVIRONMENTAL IMPACTS

Section 4.0, Environmental Checklist, is the analysis portion of this Initial Study. The section evaluates the potential environmental impacts of the project. Section 4.0 includes 19 environmental issue subsections, including the CEQA Mandatory Findings of Significance. The environmental issue subsections, numbered 1 through 19, consist of the following:

- | | |
|-------------------------------------|---|
| 4.1 Aesthetics | 4.11 Mineral Resources |
| 4.2 Agricultural Resources | 4.12 Noise |
| 4.3 Air Quality | 4.13 Population and Housing |
| 4.4 Biological Resources | 4.14 Public Services |
| 4.5 Cultural Resources | 4.15 Recreation |
| 4.6 Geology and Soils | 4.16 Transportation/Traffic |
| 4.7 Greenhouse Gas Emissions | 4.17 Tribal Cultural Resources |
| 4.8 Hazards and Hazardous Materials | 4.18 Utilities and Service Systems |
| 4.9 Hydrology and Water Quality | 4.19 Mandatory Findings of Significance |
| 4.10 Land Use and Planning | |

Each environmental issue subsection is organized in the following manner:

The **Setting** summarizes the existing conditions at the regional, sub-regional, and local levels, as appropriate, and identifies applicable plans and technical information for the particular issue area.

The **Discussion of Impacts** discusses each environmental issue checklist question in detail. The level of significance for each topic is determined by considering the predicted magnitude of the impact. Four levels of impact significance are evaluated in this Initial Study:

No Impact: No project-related impact on the environment would occur with project development.

Less Than Significant Impact: The impact would not result in a substantial adverse change in the environment. This impact level does not require mitigation measures.

Less Than Significant Impact with Mitigation: An impact that may have a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (CEQA Guidelines Section 15382). However, the incorporation of mitigation measures that are specified after analysis would reduce the project-related impact to a less than significant level.

Potentially Significant Impact: An impact that is potentially significant but for which mitigation measures cannot be immediately suggested or the effectiveness of potential mitigation measures cannot be determined with certainty, because more in-depth analysis of the issue and potential impact is needed. In such cases, an EIR is required.

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2.0 PROJECT INFORMATION

- 1. Project title:** McKissick Minor Subdivision
- 2. Lead agency name and address:** City of Pleasant Hill
100 Gregory Lane
Pleasant Hill, CA 94523
- 3. Contact person and phone number:** Lori Radcliffe
City of Pleasant Hill Planning Division
(925) 671-5297
- 4. Project location:** The project site is located at the 90 Block of McKissick Street on two parcels. Assessor's Parcel Numbers (APN) are as follows: 149-061-026, and 149-061-033.
- 5. Project sponsor's name and address:** Providence Development Corporation
1055 Craddock Court
Walnut Creek, CA 94596
- 6. General Plan designation:** Single Family Residential, Medium Density
- 7. Zoning:** R-10 (single-family residential, medium density, minimum lot size 10,000 square feet)
- 8. Project Description:** The project includes a vesting tentative parcel map, to create four parcels ranging in size from 10,549 to 12,262 net square feet and an architectural review permit to allow 4 single-family homes on these lots. The overall site area is approximately 1.19-acres (comprised of two existing legal parcels). Project improvements would include stormwater treatment and retention facilities, and new street paving. The project would construct an on-site access road with a hammerhead turnaround and three guest parking spaces. The project site would be developed with four two-story homes, all with two car garages and driveways, with one floor plan option. Additionally, the project includes installation of a new storm drain along existing McKissick Street and Hubbard Avenue. Project construction would take between 12 to 18 months.
- 9. Surrounding land uses and setting:** The project site consists of two undeveloped parcels that are accessed via an access easement. Currently, the site does not have a street addresses. The parcels are directly south of 60 and 98 McKissick Street. The site is relatively flat with a slight downward slope to the southeast with an elevation range from approximately 79 feet above mean sea level in the southeast to 92 feet above mean sea level in the northwest. Single-family residential development surrounds the site. The

closest residences immediately adjacent to the site are located at the southern border, approximately 17' and 30' from the shared property line.

10. Environmental factors potentially affected:

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

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology and Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials | <input checked="" type="checkbox"/> Hydrology and Water Quality |
| <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Tribal Cultural Resources | <input checked="" type="checkbox"/> Utilities and Service Systems |
| <input type="checkbox"/> Mandatory Findings of Significance | | |

12. Determination: (To be completed by the lead agency)

Based on 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.
- 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

Greg Fuz
Printed Name

City Planner
Title

Date

City of Pleasant Hill
Lead Agency

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3.1 PROJECT LOCATION

The project site for the proposed McKissick Subdivision Project (project) is in Pleasant Hill, California, in Contra Costa County (**Figure 3.1, Project Vicinity**). The property is comprised of two undeveloped parcels that do not have street addresses. The parcels are directly south of 60 and 98 McKissick Street. Single-family residential development surrounds the site, with the closest residences immediately adjacent to the site at the southern property line.

3.2 PROJECT OVERVIEW

The proposed project would involve construction of a 4-lot subdivision of detached single-family homes and associated improvements, such as access road and paving of a portion of McKissick Street. The site consists of 1.19 acres. Residences would be constructed on lots of 10,549 to 12,262 (net) square feet at a proposed density of 4.5 units per acre. Project amenities would include a new storm drain installed along existing McKissick Street and Hubbard Avenue, draining to Matson Creek, a private interior roadway, dedicated residential parking, and guest parking.

3.3 EXISTING SETTING

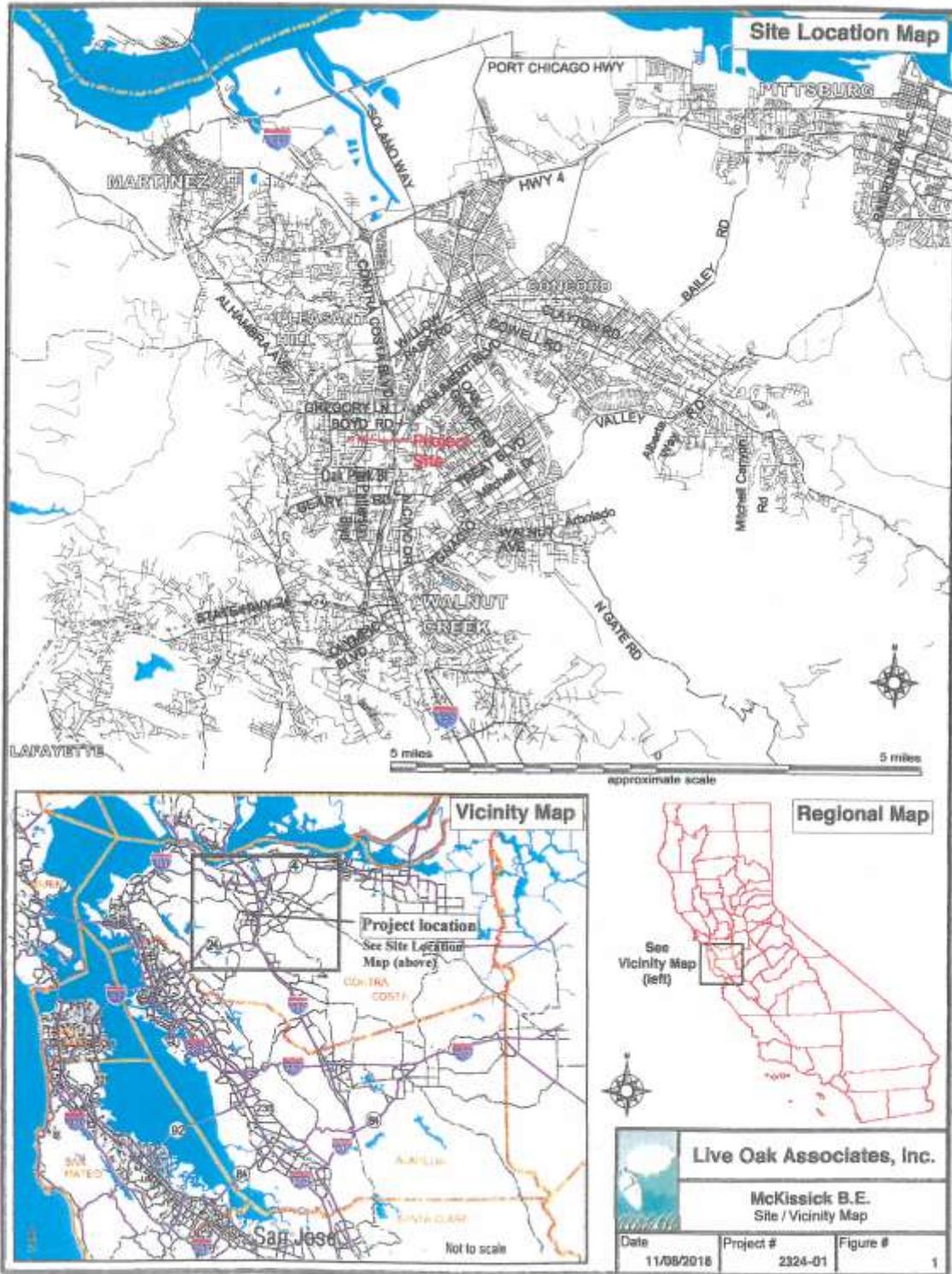
The site is relatively flat with a slight downward slope to the southeast with an elevation range from approximately 79 feet above mean sea level in the southeast to 92 feet above mean sea level in the northwest. The ground is permeable (Ref soil report). The site is currently undeveloped and consists of non-producing walnut orchard. Additionally, there are lesser amounts of cottonwood, privet, prunus, almond, coast live oak, valley oak, and elm trees with some shrubs and vines. The property contains one access off of McKissick Street. The site is surrounded by single-family homes all zoned R-10 (Single Family – 10,000 sf ft. lots).

PROJECT SITE HISTORY

The current project site was cultivated as a walnut orchard. No structures are on site.

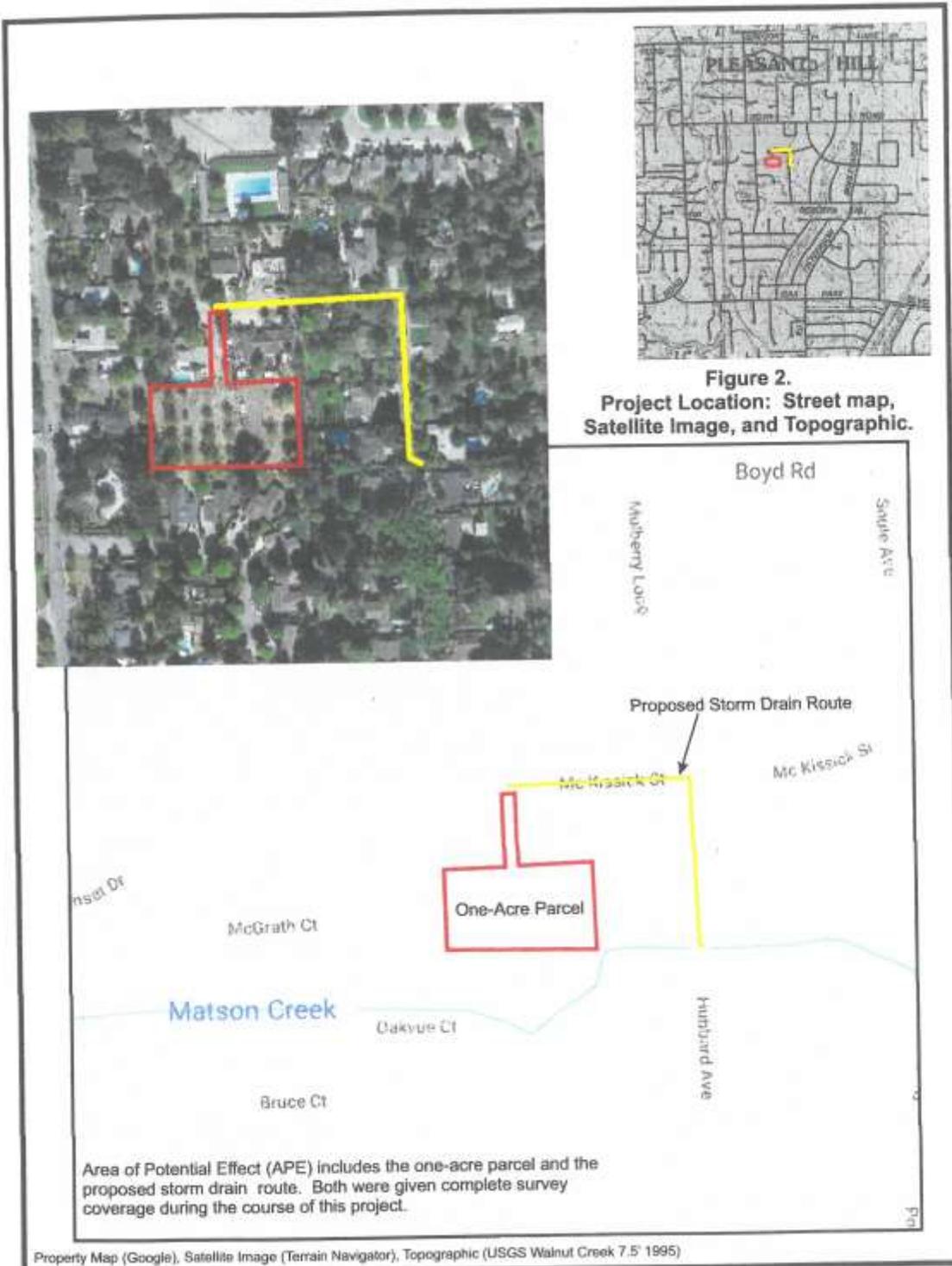
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FIGURE 3-1 PROJECT VICINITY



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FIGURE 3-2 PROJECT LOCATION MAP



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The project site is mostly blocked from view from McKissick Street. Photos showing the project



site are presented in Figure 3-3, **Existing Site Photos.**

Photo 1: View south from McKissick Street looking along proposed access easement to site.



Photo 2: View west on McKissick Street
Note proposed access to site.



Photo 3: View east on McKissick Street
Note proposed access to site.

Figure 3-3 The 1.9 acre site is vacant and is located within Poets Corner neighborhood established in the late 1940's and early 1950's. The site is surrounded by residential parcels.

PROJECT CHARACTERISTICS

The project includes a vesting tentative map and an architectural review permit, to allow development of four detached single family two-story homes featuring one floor plan. **Figure 3-4, Preliminary Site Plan**, shows the proposed lot configurations.

Table 3-1 compares building specification for each lot. **Figures 3-5a** and **3-5b** show architectural design schemes for the single-family homes on the project site.

**TABLE 3-1
BUILDING SPECIFICATION PER LOT**

Feature	Lot 1	Lot 2	Lot 3	Lot 4
Lot Size (square feet)	11,349 (net) 18,215 (gross)	10,549	12,262	10,621
Lot Coverage (square feet)	2,935	2,935	2,935	2,935
Lot Coverage (%)	25.9	27.8	23.9	27.6
Stories	2	2	2	2
Building Height	26'	26'	26'	26'

Source: Providence Development Corporation

The maximum lot coverage would not exceed 27.8 percent. The building footprint would comprise all ground-level structures, including garages, covered porches and patios. The buildings would not exceed 35 feet in height nor two and a half stories from the finished pad grade (the ground) to the top of the roof. Homes would be no more than 26 feet high to minimize massing for structures.

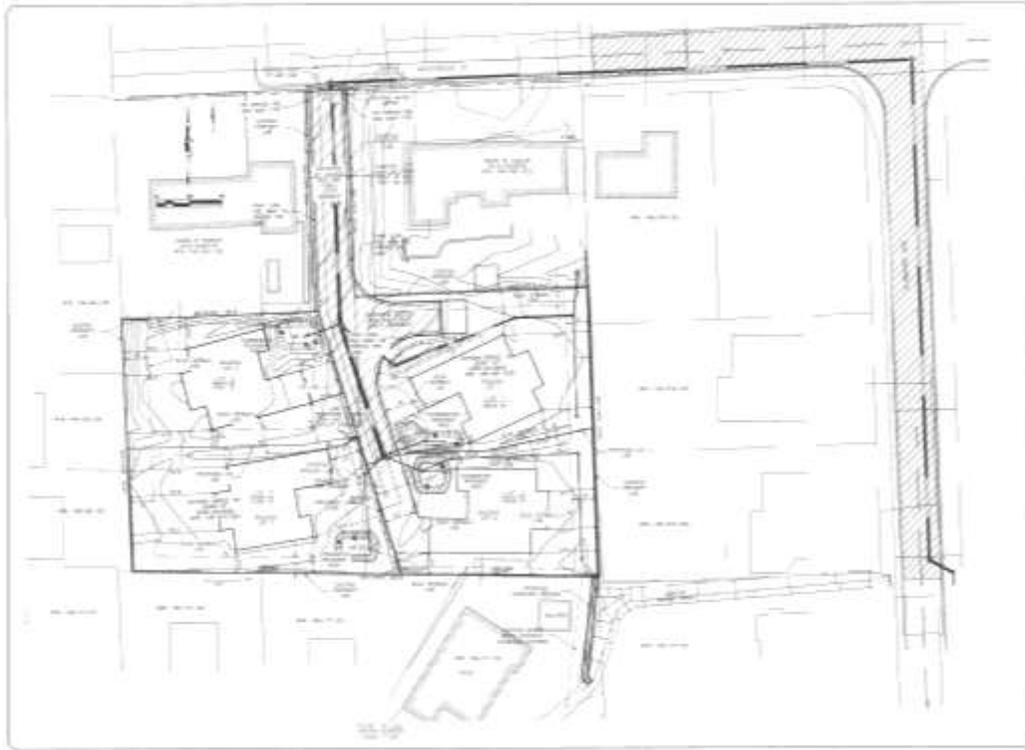
PROJECT CIRCULATION

The project would construct a private road for access from McKissick Street that would service the new lots. Vehicles would enter and exit the site through private road access; turnarounds would be made in the proposed hammerhead.

UTILITIES

Residential homes would connect to the existing water, sewer, electrical, and telecommunications networks. The project would be provided potable water by the Contra Costa Water District. Each house would have its own service connection and meter, with a separate meter for landscape irrigation. The project would also be served by the Central Contra Costa Sanitary District for sanitary sewer service. Gas and electric service would be provided by the Pacific Gas and Electric Company (PG&E).

FIGURE 3-4 PRELIMINARY SITE PLAN



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FIGURE 3-5 ARCHITECTURAL DESIGN SCHEMES



Bungalow



Craftsman

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3.4 EXISTING ZONING

The project site is currently zoned for single-family medium-density development (R-10) to accommodate lot sizes of 10,000 square feet (Pleasant Hill 2003). **Table 3-2** summarizes applicable development standards unless modified by the PUD process.

**TABLE 3-2
DEVELOPMENT STANDARDS FOR SINGLE-FAMILY ZONING**

Requirement Regulations	R-10 Zoning
Minimum Lot Area	10,000 sq. ft.
Minimum Lot Width	80 ft.
Minimum Lot Depth	90 ft.
Creek Setbacks	N/A
Minimum Building Height	35 ft.
Maximum Number of Stories	2½
Maximum Lot Coverage	30%
Minimum Site Landscaping	50% front yard area
Maximum Gross Floor Area Ratio	40%
Parking	Two-car enclosed garage

Source: Pleasant Hill, 2019

3.5 CONSTRUCTION

The project construction is planned to take place in a single phase and is estimated to take approximately 12 to 18 months to complete. The new homes would be constructed after site preparation, grading, and improvements are complete.

Construction equipment would include bulldozers, scrapers, backhoes, excavators, loaders, compactors, rollers, and paving machines. Construction crews would vary in size and would comprise approximately 10 to 20 people.

Construction activities would consist of site preparation, including removal of existing vegetation and grading, excavation, and roadway construction. Project plans would include design requirements for utilities. Pursuant to the City’s Noise Ordinance, construction would generally occur Mondays through Fridays between the hours of 7:30 a.m. and 7:00 p.m. Project construction would be prohibited on weekends and City-recognized holidays. Exemptions are issued by a special permit as specified in Section 9.15.040.

CONSTRUCTION TECHNIQUES

To minimize and avoid potentially environmental impacts that could result from required development work, standard construction and engineering guidelines would be incorporated into project plans. These engineering and design recommendations would be consistent with federal and state environmental protection laws. The actions would be consistent with required permits associated with residential subdivision development projects. **Table 3-3, Summary of Construction Techniques**, provides a broad overview of recommended actions by construction

3.0 PROJECT DESCRIPTION

phase. The geotechnical report prepared for the project includes greater detail relative to project activities and recommendations. The report is included as **Appendix Geo**.

**TABLE 3-3
SUMMARY OF CONSTRUCTION TECHNIQUES**

Measure	Description	Page Number in Report (Appendix Sutton)
Earthwork		
Clearing and Site Preparation	Site preparation should comprise clearing and grubbing to remove vegetation, debris, and organic-rich root zones including tree roots over ¼” diameter from the entire area to be re-developed. As this site was formerly a walnut grove, we recommend digging more deeply to search for, and remove decayed root mass. Any zones of organics or otherwise unsuitable fill, including any manmade fill encountered should be removed from the site.	Page 19 of 26 – section 5.1.1
Existing Soil and Fill Recompanction	Existing soil is suitable for site grading and backfilling. Rock or concrete chunks should be culled with no more than 20% by weight exceeding 1 ½” size.	Page 19 of 26 – section 5.1.2
Building Pads and Retaining Walls	The pads should be cross-scarified, moisture conditioned, and re-compacted as an engineered fill to provide uniform bearing.	Page 13 of 26 – section 4.3.2
Subgrade Preparation	Prior to placing fill, the soils in areas to be filled should be thoroughly scarified, then moistened, and compacted.	Page 20 of 26 – section 5.1.4
Fill Material	The on-site or similar clay soils may be used for general site grading and backfilling. When placed and tested under the oversight of the Geotechnical Engineer’s representative, in accordance with the recommendations, it constitutes Engineered Fill.	Page 19 of 26 – section 5.1.2
Compaction	Compact the engineered fill to no less than 88% and no greater than 92% of maximum dry density, at between +2% and +5% over the optimum moisture content.	Page 19 of 26 – section 5.1.2
Utility Trench Backfill	Utility trenches should be backfilled with native site soils, except that trenches through non-expansive fill should be backfilled with like materials and compaction.	Page 21 of 26 – section 5.5, 5.6
Exterior Flatwork	Driveways, turnarounds and parking areas should be underlain by non-expansive fill uniform in consistency and degree of compaction to provide uniform support.	Page 22 of 26 – section 5.5, 5.6
Construction During Wet Weather Conditions	<p>Earthwork is more difficult when clayey soils are overly moist because the fills become unstable. Soil that is too wet compared with its optimum moisture content will not respond to compactive effort. This is more significant in the wet season (officially September 15 to April 15) because of reduced sunlight available to dry back soil if it becomes overly moist. So, all excavations and soil stockpiles should be tarped whenever work is not physically in progress.</p> <p>Overly wet soils can be stabilized by mixing in lime, cement or other chemicals, which boil off the excess moisture by creating an exothermic reaction. Obviously, this is hazardous work, which should only be done by experienced crews using specialized mixing machinery under the Geotechnical Engineer’s oversight. This is an expensive operation and the residual lime makes the soil caustic, and difficult to grow plants in the treated soil.</p> <p>The project Geotechnical Engineer should be consulted if any of these options will be required to correct unstable site conditions or when wet weather conditions prevail during earthwork operations.</p>	Supplemental letter dated Feb. 21, 2019 – section 5.1.4

3.0 PROJECT DESCRIPTION

Measure	Description	Page Number in Report (Appendix Sutton)
Surface Drainage, Irrigation, and Landscaping	Wetting of foundation soils should be prevented during and after construction. Dry-climate plantings and irrigation systems, such as drip irrigation significantly reduce the potential for wetting of foundation soils.	Page 24 of 26 – section 6
Stormwater Runoff Structures	Preventions of wetting of foundation soils include compaction of impervious fill around structures, installing water proof membranes, providing adequate grades for rapid runoff of surface waters, and collecting roof discharge water in non-perforated pipes diverting the flow to a subsurface piping system, or directing the flow well beyond the limits of the construction.	Page 24 of 26 – section 5.2
Setbacks	Trenches that must parallel the sides of buildings should be more than 2’ away from foundations, and above a down-sloping, 1.5H:1V plane, drawn from a line 9” above the foundation bearing level.	Page 21 of 26 – section 5.2
Future Maintenance	Periodically look for overly wet soil, heaved or depressed paving, distressed plants and presence of moss as problem indicators. Observe the system periodically, minimize watering time and observe that spray heads are properly directed, and not directed against building walls. Check for dislodged drip irrigation system.	Page 24 of 26 – section 6
Foundation Support		
Post-Tensioned Slabs	Post-tensioned slab should be at least 12” thick. The pads should be cross-scarified, moisture conditioned, and re-compacted as an engineered fill to provide uniform bearing.	Page 13 of 26 – section 4.3.2
Retaining Walls	All walls should be founded on competent soil. Embed the blocks a minimum 12” below adjacent final grad. Use an allowable bearing pressure of 2,000 psf for design. For lateral resistance, use a passive resistance of 255 pounds per square foot per foot of depth, pcf. The wall back drain should consist of clean drain rock, such as Caltrans Class 1 Permeable Material and drained with either by weep holes or perforated, rigid-walled PVC pipe with cleanout risers.	Supplemental letter dated Feb. 21, 2019 – section 4.7
Seismic Design Criteria	For seismic design using the 2013 California Building Code (CBC), it is recommended that seismic design criteria, Site Classification “D” in accordance with section 1613 be used.	Page 12 of 26 – section 4.2
Pavements	Asphalt pavement should use a Traffic Index of 4, a subgrade R-value of 40, and Caltrans minimum section of 2” HMA on 6” AB	Page 23 of 26 – section 5.6.2

Source: The Sutton Group

3.6 PROJECT APPROVALS

As the lead agency, the City of Pleasant Hill has the ultimate authority for project approval or denial.

The project would require the following discretionary approvals by the City:

- Adopt an Initial Study/Mitigated Negative Declaration
- Architectural Review Approval/Recommendation
- Vesting Tentative Map Approval

RELATIONSHIP OF PROJECT TO OTHER PLANS

CITY OF PLEASANT HILL GENERAL PLAN

The project would be located entirely in Pleasant Hill. The project has been reviewed for consistency with the Pleasant Hill 2003 General Plan. The City's General Plan is the fundamental document governing land use development in the city. The General Plan includes numerous goals and policies pertaining to land use and design, growth management, circulation, community facilities and utilities, open space and conservation, health, safety, and noise. The project would be required to abide by all applicable goals and policies in the adopted General Plan.

4.0 ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.1 AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

Pleasant Hill is located east of San Francisco Bay in Contra Costa County. The project site is south of Boyd Road west of Soule Avenue. The project site is currently vacant. Existing vegetation is present from the site's previous uses as an orchard.

Views of the project site are available from within the site and from the residential neighborhood surrounding the project site. There are no scenic highways in the project vicinity (Views of the project site are shown in **Figure 4.1-1, Existing Project Site Views**).

View of entrance to site off of McKissick Street



North boundary of property



Eastern boundary of property



Southern boundary of property



Southern boundary of property



Western boundary of property



FIGURE 4.1-1 EXISTING PROJECT SITE VIEWS

REGULATORY SETTING

Pleasant Hill's General Plan includes policies to avoid power outages and improve aesthetics by undergrounding utilities where feasible. The following goals and policies would apply to the project.

Community Development Goal 24. Place utility lines underground.

Community Development Policy 24A. Achieve undergrounding of utilities when and where feasible.

Community Development Program 24.1. Require undergrounding of utilities in conjunction with installation or modification of public and private improvements.

DISCUSSION OF IMPACTS

- a) *No Impact.* There are no designated scenic vistas in the project vicinity.
- b) *No Impact.* There are no designated state scenic highways in the project vicinity.
- c) *Less Than Significant Impact.* The existing vacant site has low visual character as it is the remnants of an abandoned walnut orchard and generally lacks aesthetic value. The existing site has low visual character and does not reflect the visual character of the adjacent residential area.

The project would have a temporary impact on the visual character of the area during construction. The visual impacts from construction would arise from the presence of bare ground, construction stockpiling, and views of construction equipment. The construction period would be relatively short, and views of the project from adjacent properties would be limited.

At completion, the new homes and surrounding landscaping are proposed to be developed to be consistent with the existing neighborhood. The project includes landscaping and homes designed with a consistent theme and visual variations to create a positive overall visual impact. The proposed landscaping plan includes planting replacement trees to shield the project from neighboring properties and would enhance its appearance.

Pleasant Hill Municipal Code Title 18 establishes benchmarks for compliance with the City's development standards to ensure future development would be compatible with surrounding design standards for residential properties. Prior to construction of any residences, the project would require review by the City's Architectural Review Commission, including being consistent with City-Wide Design Guidelines that encourage high quality design that is compatible with existing development patterns. Therefore, this impact would be less than significant. The project would also be consistent with Community Development Goal 3 to approve residential development with design standards compatible with adjacent development.

- d) *Less Than Significant Impact.* The project may result in new sources of light that could impact surrounding properties, such as headlights from vehicles could contribute to an overall increase in the area's ambient lighting. However, compliance with existing lighting standards would minimize light impacts on adjacent properties and would reduce potential effects on the night sky. The project will include landscaping that

includes trees and shrubs, which would serve as a barrier to limit the amount of light that is cast on adjacent buildings as the trees and shrubs mature. Site design plans would be submitted to the City for review to ensure project features are compatible with residential design standards. The project would not create any substantial new sources of light or glare that would adversely affect day or nighttime views in the area. The impact would be less than significant.

Mitigation Measures

None required.

4.0 ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.2 AGRICULTURAL RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The site is currently surrounded by single-family medium-density residential development. The property is a portion of an abandoned walnut orchard.

California Farmland Mapping and Monitoring Program

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. Farmland designations also include Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. The US Department of Agriculture, Natural Resources Conservation Service (NRCS) produces data on soils to compile maps of important farmland. In 2018, a geotechnical site investigation conducted by The Sutton Group included testing of soils mapped as Tierra Series and assigned to Hydrologic Soil Groups D by the NRCS.

DISCUSSION OF IMPACTS

- a) *No Impact.* The map of important farmland for Contra Costa County indicates that the project site includes Urban and Built-Up Land (DOC 2016).

- b) *No Impact.* There are no active Williamson Act contracts in the city (California Department of Conservation 2012). Therefore, there would be no impact on Williamson Act contracts.
- c) *No Impact.* The project site has a General Plan land use designation of Single Family Medium Density. The site is not used for agricultural purposes, and the project would not convert existing farmland to nonagricultural use.
- d) *No Impact.* The project site does not contain any forestland. Therefore, the project would not result in the loss or conversion of any forestland and would have no impact on forestland.
- e) *No Impact.* As discussed above, the project site and adjacent properties are not designated as important farmland and do not contain any forestland. Therefore, the project would not result in conversion of either important farmland or forestland and would have no impact.

Mitigation Measures

None required.

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

SETTING

The project site is in the San Francisco Bay Area Air Basin (SFBAAB). Air quality in the region is determined by topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the SFBAAB, pursuant to the regulatory authority of the Bay Area Air Quality Management District (BAAQMD).

San Francisco Bay Area Air Basin

The SFBAAB includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. There are 11 climatological subregions within the SFBAAB. Pleasant Hill is located in the Diablo and San Ramon Valley subregions.

The San Ramon Valley is long and narrow and extends south from Walnut Creek to Dublin. At its southern end, it opens into the Amador Valley. The mountains on the west side of these valleys block much of the marine air from reaching the valleys. During the daytime, there are two predominant flow patterns: an up-valley flow from the north and a westerly flow (wind from the west) across the lower elevations of the Coast Range. On clear nights, surface inversions separate the flow of air into two layers: the surface flow and the upper layer flow. When this happens, there are often drainage surface winds that flow down-valley toward the Carquinez Strait.

Wind speeds in these valleys generally are low. Monitoring stations in Concord and Danville report annual average wind speeds of 5 miles per hour (mph). Air temperatures in these valleys are cooler in the winter and warmer in the summer than are temperatures farther west, as these

valleys are far from the moderating effect of San Francisco Bay and ocean. Mean summer maximum temperatures are in the low to mid 80s. Mean winter minimum temperatures are in the high 30s to low 40s.

Pollution potential is relatively high in these valleys. On winter evenings, light winds combined with surface-based inversions and terrain that restricts air flow can cause pollutant levels to build up. In the summer months, ozone and ozone precursors are often transported into the valleys from both the central SFBAAB and the Central Valley (BAAQMD 2017a).

Pollution Potential Related to Emissions

Although air pollution potential is strongly influenced by climate and topography, the air pollution that occurs in a location also depends on the amount of air pollutant emissions in the surrounding area or those that have been transported from more distant places. Air pollutant emissions generally are highest in areas that have high population densities, high motor vehicle use, and/or industrialization. Contaminants created by photochemical processes in the atmosphere, such as ozone, may result in high concentrations many miles downwind from the sources of their precursor chemicals (BAAQMD 2017a).

Criteria Air Pollutants

Air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. These regulated air pollutants are known as criteria air pollutants and are categorized as primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_x), sulfur dioxide (SO₂), coarse particulate matter (PM₁₀) and fine particulate matter (PM_{2.5}), lead, and fugitive dust are primary air pollutants. Of these, CO, SO₂, PM₁₀, and PM_{2.5} are criteria pollutants. ROG and NO_x are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O₃) and nitrogen dioxide (NO₂) are the principal secondary pollutants. **Table 4.3-1** describes each of the primary and secondary criteria air pollutants and their known health effects.

**TABLE 4.3-1
CRITERIA AIR POLLUTANTS – SUMMARY OF COMMON SOURCES AND EFFECTS**

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO ₂)	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O ₃)	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (NO _x) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Particulate Matter (PM ₁₀ & PM _{2.5})	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in

4.0 ENVIRONMENTAL CHECKLIST

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
PM _{2.5})		people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO ₂)	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, can damage marble, iron and steel; damage crops and natural vegetation. Impairs visibility.

Source: CAPCOA 2011

Ambient Air Quality

The US Environmental Protection Agency (EPA) and the State of California have established health-based ambient air quality standards (CAAQS) for the criteria pollutants described above, as well as for lead, sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Air quality standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Areas with air quality that exceed adopted air quality standards are designated as nonattainment areas for the relevant air pollutants, while areas that comply with air quality standards are designated as attainment areas for the relevant air pollutants. The SFBAAB's current attainment status regarding federal and state ambient air quality standards is summarized in **Table 4.3-2**. The region is nonattainment for federal ozone and PM_{2.5} standards, as well as for state ozone, PM₁₀, and PM_{2.5} standards (BAAQMD 2017a).

**TABLE 4.3-2
FEDERAL AND STATE AMBIENT AIR QUALITY ATTAINMENT STATUS FOR THE
SAN FRANCISCO BAY AREA AIR BASIN**

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone (O ₃)	8 Hours	0.070 ppm (137 µg/m ³)	N	0.070 ppm	N
	1 Hour	0.09 ppm (180 µg/m ³)	N	No standard	Not applicable
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m ³)	A	9 ppm (10 mg/m ³)	A
	1 Hour	20 ppm (23 mg/m ³)	A	35 ppm (40 mg/m ³)	A
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm (339 µg/m ³)	A	0.100 ppm	U
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	A
Sulfur Dioxide (SO ₂)	24 Hours	0.04 ppm (105 µg/m ³)	A	0.14 ppm (365 µg/m ³)	—
	1 Hour	0.25 ppm (665 µg/m ³)	A	0.075 ppm (196 µg/m ³)	—
	Annual Arithmetic Mean			0.030 ppm (80 µg/m ³)	—

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Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	N	No standard	Not applicable
	24 Hours	50 µg/m ³	N	150 µg/m ³	U
Particulate Matter – Fine (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	N	15 µg/m ³	A
	24 Hours			35 µg/m ³	N
Sulfates	24 Hours	25 µg/m ³	A	—	—
Lead	30-Day Average	1.5 µg/m ³		—	A
	Calendar Quarter	—	—	1.5 µg/m ³	A
	Rolling 3-Month Average	—	—	0.15 µg/m ³	—
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	U	—	—
Vinyl Chloride (chloroethene)	24 Hours	0.01 ppm (26 µg/m ³)	No information available	—	—
Visibility-Reducing Particles	8 Hours (10:00 to 18:00 PST)	—	U	—	—

Source: BAAQMD 2017a

Notes: A=attainment; N=nonattainment; U=unclassified; mg/m³=milligrams per cubic meter; ppm=parts per million; ppb=parts per billion; µg/m³=micrograms per cubic meter

Based on the nonattainment status, ozone, PM₁₀, and PM_{2.5} are the pollutants most intensely affecting the SFBAAB. Ambient concentrations of these pollutants at specific sites will vary due to localized variations in emission sources and climate. Concentrations near the project site can be inferred from ambient air quality measurements conducted by the BAAQMD at nearby air quality monitoring stations. The Concord–2975 Treat Boulevard air quality monitoring station is the closest station to the project site with data for the last 3 years, approximately 3 miles to the east. **Table 4.3-3** summarizes the published data since 2014 from the Concord–2975 Treat Boulevard air quality monitoring station for each year that monitoring data is provided.

**TABLE 4.3-3
SUMMARY OF AMBIENT AIR QUALITY DATA**

Pollutant Standards	2014	2015	2016
Ozone			
Maximum 1-hour concentration (ppm) state	0.095	0.088	0.095
Number of days above state 1-hour standard	1	0	1
Maximum 8-hour concentration (ppm) state	0.081	0.074	0.075
Number of days above state 8-hour standard (0.070 ppm)	2	4	2
Maximum 8-hour concentration (ppm) federal	0.080	0.074	0.073

4.0 ENVIRONMENTAL CHECKLIST

Pollutant Standards	2014	2015	2016
Number of days above federal 8-hour 2015 standard (0.070 ppm)	2	2	2
Fine Particulate Matter (PM_{2.5})			
Maximum 24-hour concentration (µg/m ³)	30.6	31.0	20.7
Number of days above standard	0	0	0
Particulate Matter (PM₁₀)			
Maximum 24-hour concentration (µg/m ³) state	42.5	24.0	19.0
Number of days above state standard	0	0	0
Maximum 24-hour concentration (µg/m ³) federal	40.8	22.5	18.7
Number of days above federal standard	0	0	0

Source: CARB 2018

Air Quality Attainment Plan

The BAAQMD is responsible for preparing plans to attain ambient air quality standards in the San Francisco Bay Area Air Basin. The BAAQMD prepares ozone attainment plans for the national ozone standard and clean air plans for the California standard, both in coordination with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG).

The BAAQMD adopted the Bay Area 2017 Clean Air Plan in April 2017. The plan addresses nonattainment of the national 1-hour ozone standard in the SFBAAB. The Bay Area 2017 Clean Air Plan establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving California and national air quality standards. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and vehicle miles traveled (VMT) projections for the region. The Clean Air Plan defines a control strategy that the BAAQMD and its partners will implement to (1) reduce emissions and decrease ambient concentrations of harmful pollutants; (2) safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily impacted by air pollution; and (3) reduce greenhouse gas emissions to protect the climate. It is important to note that in addition to updating the previously prepared ozone plan, the Clean Air Plan also serves as a multipollutant plan to protect public health and the climate. In its dual role as an update to the state ozone plan and a multipollutant plan, the Bay Area 2017 Clean Air Plan addresses four categories of pollutants (BAAQMD 2017a):

- Ground-level ozone and its key precursors, ROG and NOx
- Particulate matter: primary PM_{2.5}, as well as precursors to secondary PM_{2.5}
- Air toxics
- Greenhouse gases

The Clean Air Plan includes local guidance for the State Implementation Plan, which includes the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards.

Toxic Air Contaminants

In addition to the criteria air pollutants described above, another group of pollutants, commonly referred to as toxic air contaminants (TACs) or hazardous air pollutants, can result in health effects that can be quite severe. The California Air Resources Board (CARB) has designated 244 compounds as TACs. Many TACs are confirmed or suspected carcinogens, or are known or suspected to cause birth defects or neurological damage. Secondly, many TACs can be toxic at very low concentrations. For some chemicals, such as carcinogens, there are no thresholds below which exposure can be considered risk-free.

Industrial facilities and mobile sources are significant sources of TACs. However, common urban facilities also produce TAC emissions, such as gasoline stations (benzene), hospitals (ethylene oxide), and dry cleaners (perchloroethylene). Automobile exhaust also contains TACs such as benzene and 1,3-butadiene. In addition, diesel particulate matter (diesel PM) is a TAC. Diesel PM differs from other toxic air contaminants in that it is not a single substance but rather a complex mixture of hundreds of substances. BAAQMD research indicates that mobile-source emissions of diesel particulate matter, benzene, and 1,3-butadiene represent a substantial portion of the ambient background risk from toxic air contaminants in the SFBAAB (BAAQMD 2014).

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others because of the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases (OEHHA 2007).

Residential areas are considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation.

As a proposed single-family housing development, the project itself is considered a future sensitive receptor. The closest existing sensitive receptors to the project site are single-family residences adjacent to the project site, south, west, and east.

Odors

The land uses identified by the BAAQMD as sources of odors include wastewater treatment plants, wastewater pumping facilities, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing and fiberglass manufacturing facilities, painting/coating operations, rendering plants, coffee roasters, food processing facilities, confined animal facilities, feedlots, dairies, green waste and recycling operations, and metal smelting plants. If a source of odors is proposed to be located near existing or planned sensitive receptors, it could have the potential to cause operational-related odor impacts. With respect to operational impacts, the BAAQMD recommends screening criteria based on the distance between the receptor and the types of sources known to generate odors. The project site vicinity does not include any these potential odor sources.

DISCUSSION OF IMPACTS

- a) *Less Than Significant Impact.* The applicable air quality plan is the BAAQMD Bay Area 2017 Clean Air Plan. Criteria for determining consistency with the Clean Air Plan are:
- The project supports the primary goals of the Clean Air Plan.
 - The project conforms to applicable control measures from the plan and does not disrupt or hinder the implementation of any Clean Air Plan control measures.

The primary goals of the Clean Air Plan are compliance with the state (California) and national ambient air quality standards. As discussed below in checklist item b, the project is below all of the screening criteria listed in Table 3-1 of the BAAQMD's (2017b) CEQA Guidelines for short-term construction emissions and long-term operational emissions. The screening criteria provide lead agencies and project applicants with a conservative indication of whether the proposed project could result in potentially significant air quality impacts. Therefore, the project would support the primary goals of the Clean Air Plan.

BAAQMD air quality planning control measures are developed, in part, based on the emissions inventories contained in the Clean Air Plan, which are derived from projected population growth and VMT for the region. These inventories are largely based on the predicted growth identified in regional and community general plans, including associated development projects. Projects that result in an increase in population or employment growth beyond that identified in regional or community plans could result in increases in VMT and subsequently increase mobile source emissions. These increases would not have been accounted for in the BAAQMD's air quality plans, making those projects inconsistent with the Clean Air Plan.

The proposed project is a residential development of approximately 1.19 acres in Pleasant Hill. The existing zoning for the site is R-10, which allows a maximum development potential of 4.5 dwelling units per acre. The proposed project includes four new dwelling units; it would not exceed the allowed development intensity. Additionally, the anticipated population increase would be within the growth projections assumed in the General Plan. The project would not hinder implementation of the Clean Air Plan.

Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan, and the impact would be less than significant.

- b) *Less Than Significant Impact with Mitigation.* The BAAQMD has developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether the proposed project could result in potentially significant air quality impacts. Lead agencies are not required to perform a detailed air quality assessment of a project's pollution emissions if all required screening criteria are met.

Construction Emissions

Per the BAAQMD's (2017b) CEQA Guidelines, if all of the following screening criteria are met, project construction would result in a less than significant impact from criteria air pollutant and precursor emissions:

4.0 ENVIRONMENTAL CHECKLIST

1. The project is below the applicable screening level size shown in Table 3-1 of the BAAQMD CEQA Guidelines; and
2. All Basic Construction Mitigation Measures would be included in the project design and implemented during construction; and
3. Construction-related activities would not include any of the following:
 - Demolition;
 - Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);
 - Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site);
 - Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement); or
 - Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

Table 3-1 of the BAAQMD CEQA Guidelines indicates a screening level size for construction emissions of 114 dwelling units. The project would construct four dwelling units, and the construction activities would not include any of the items listed in under #3 above. The BAAQMD Basic Construction Mitigation Measures are shown in **Table 4.3-4**.

**TABLE 4.3-4
BAAQMD BASIC CONSTRUCTION MITIGATION MEASURES**

Basic Construction Mitigation Measures
1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The air district's phone number shall also be visible to ensure compliance with applicable regulations.

Source: BAAQMD 2017a

Mitigation measure **AQ-1** would require implementation of the Basic Construction Mitigation Measures during all construction activities. With implementation of mitigation measure **AQ-1**, construction-generated emissions would be less than significant.

Operational Impacts

Per the BAAQMD, as the project meets the screening criteria provided in Table 3-1, the project would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the thresholds of significance. Project operation would therefore result in a less than significant impact on air quality from criteria air pollutant and precursor emissions (BAAQMD 2017a). Table 3-1 of the BAAQMD CEQA Guidelines indicates a screening level size for operational emissions of 325 dwelling units. The proposed project would construct four homes. Therefore, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The impact would be less than significant.

- c) *Less Than Significant Impact.* Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. According to the BAAQMD, no single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, the BAAQMD considered the emissions levels for which a project's individual emissions would be cumulatively considerable. According to the BAAQMD (2017b), if a project exceeds the district's identified significance thresholds, the project would be cumulatively considerable. As discussed in checklist item a, the project meets all screening criteria in the BAAQMD CEQA Guidelines. Therefore, the proposed project would not exceed BAAQMD thresholds for air pollutant emissions during construction or operations. Impacts would be less than cumulatively considerable.
- d) *Less Than Significant Impact.*

Short-Term Construction Toxics

The project site is located adjacent to residential neighborhoods. Project construction would generate diesel particulate matter emissions from the use of off-road diesel equipment required for site grading, excavation, and other construction activities. Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The amount to which the receptors could be exposed, which is a function of concentration and duration of exposure, is the primary factor used to determine health risk (i.e., potential exposure to TAC emissions levels that exceed applicable standards).

According to the BAAQMD (2017a), construction-generated diesel PM emissions contribute to negative health impacts when construction is extended over lengthy periods of time. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. Construction of the proposed project is anticipated to occur over a 12 to 18-month period. In addition, the use of diesel-powered equipment during construction would be temporary and episodic. The heaviest use of diesel-powered

equipment would occur during the site preparation and grading/excavation phases in the first months of construction.

The small size of the project site (1.19 acres) would limit the size and number of diesel-powered equipment used. Project construction would be subject to and would comply with California regulations limiting idling to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable diesel PM emissions. For these reasons and because diesel fumes disperse rapidly over relatively short distances, diesel PM generated by construction activities, in and of itself, would not be expected to create an impact on community health risks. Also, the BAAQMD requires implementation of Basic Construction Mitigation Measures (see **Table 4.3-4**). These measures include actions that would substantially reduce nuisance fugitive dust, an additional source of PM_{2.5}. Therefore, the impact on community health risks from TACS due to project construction would be less than significant.

Localized Carbon Monoxide

Localized CO concentrations near roadway intersections are a function of traffic volume, speed, and delay. Transport of CO is extremely limited because carbon monoxide disperses rapidly with distance from the source.

Projects meeting all of the following screening criteria would be considered to have a less than significant impact on localized CO concentrations (BAAQMD 2017a):

1. The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plans, and local congestion management agency plans.
2. The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
3. The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

The project would not increase traffic volumes at any intersection to more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited, per the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition, which estimates an average of 39 trips per day generated as a result of the project. Therefore, the impact on community health risks from localized carbon monoxide due to project operation would be less than significant.

Toxic Air Contaminants Generated During Project Operations

The project would not include any new TAC sources. While the project would add a small amount of car and light truck traffic to the project area, it would not contribute significantly to existing diesel PM concentrations. Therefore, the project would not exacerbate existing conditions due to diesel PM emissions, and the impact would be less than significant.

The effect of existing sources of TACs on future residents of the project is considered an effect of environment on the project and as such, is not a CEQA consideration. However, it is a planning consideration. The BAAQMD's Planning Healthy Places provides planning-level guidance regarding existing sources of TACs. The BAAQMD's (2018) Planning Healthy Places website has an interactive map which shows areas that are estimated to have elevated levels of air pollution and/or TACs resulting from permitted stationary sources and high-volume roadways. The interactive map does not identify any areas of concern near the project site. The closest permitted source of TACs is a retail gas station, approximately 3,000 feet (0.56 mile) to the north. The closest high-volume roadway is Interstate 680, approximately 0.84 mile to the east. The impact of existing sources of TACs on future residents of the project would be less than significant.

For the reasons described above, the project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

e) *Less Than Significant Impact.*

Construction-Related Odors

The BAAQMD does not have a recommended odor threshold for construction activities because although heavy-duty construction equipment would emit odors, those odors would primarily be from diesel exhaust, which dissipates quickly. Construction activities would be short term and intermittent. For these reasons, construction-related odors associated with the project would not be anticipated to create objectionable odors affecting a substantial number of people. Therefore, the project's impact would be less than significant.

Operational Odors

The project does not include any of the land uses that have been identified by the BAAQMD as odor sources, nor would it locate new receptors near any of these sources. Therefore, the project is not anticipated to create objectionable odors affecting a substantial number of people, and the effect of the project would be less than significant.

Mitigation Measures

AQ-1 During construction activities, the project applicant and/or its contractor shall ensure that the BAAQMD's Basic Construction Mitigation Measures are implemented:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.

4.0 ENVIRONMENTAL CHECKLIST

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The air district's phone number shall also be visible to ensure compliance with applicable regulations.

4.0 ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.4 BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

This section describes the natural resources present in and around the project site and includes a discussion of the special-status species and sensitive habitats potentially occurring in the project area. The analysis of biological resources presented in this section is based on a Biological Evaluation (Live Oak Associates, Inc. 2018) and an arborist report (Hort Science 2017) and a peer reviewed arborist report (Traverso Tree Service 2018) prepared for the project. The studies are presented in **Appendix BIO** of this report.

The project site is on approximately 1.19 acres of vacant land and consists of a non-producing walnut orchard in a single-family residential neighborhood.

The parcels contains three biotic habitats classified as Orchard, California annual grassland, and Riparian, while the land use is developed. The property does not support special-status natural communities or other regulated features such as federally designated wetlands. The

Conservation Lands Network (accessed November 7, 2018), which provided GIS data regarding critical linkages for wildlife, does not identify the site to be within a Critical Linkage.

Mammals

Mammals observed on site during the November 2018 site visit was limited to a black-tailed deer (*Odocoileus hemionus columbianus*) bed.

Birds

Bird species observed on site during the November 2018 site visit included the Brewer's blackbird (*Euphagus cyanocephalus*) and the mourning dove (*Zenaidura macroura*).

Vegetation

A total of 47 trees have been studied project site (Hort Science 2017 and Traverso Tree Service 2018), 40 on-site and seven off-site. The trees present consist mainly of walnut, cottonwood, privet, prunus, almond, coast live oak, Valley oak, and elm with some shrubs and vines including cotoneaster, English ivy, toyon, Himalayan blackberry, and wisteria, with an understory consistent with California annual grassland species, including wild oats, periwinkle, ripgut brome, bindweed, Bermuda grass, bristly oxtongue, morning glory, prickly lettuce, alkali mallow, curly dock, hedge parsley, and vetch.

Protected Trees

Based on the tree inventory prepared for the project site (Hort Science 2017 and Traverso Tree Service 2018), a total of 17 native trees would qualify as protected trees and a total of 13 non-native trees qualify as protected trees and are proposed for removal. The property includes five coast live oaks, 13 Valley oaks, 17 walnut (grafted) trees, one plum, one cottonwood, and two glossy privets. The tree inventories also included eight off-site trees, one coast live oak, three Valley oaks, three Siberian elms and one Monterey pine. Tree replacement would provide for 47 new 15-gallon (minimum size) trees (Pleasant Hill Municipal Code Section.50.110).

Special-Status Species with Potential to Occur on the Project Site

20 special-status plant species were evaluated for potential occurrence on the property. No federally or state-listed plant species were detected in the study area, and none are expected to occur within the project site. Because of the history of site disturbance and the lack of suitable habitat, targeted special-status plant species are not expected to occur in the study area.

30 special-status animal species were evaluated for potential occurrence on the project site. Of these, the Biological Assessment (Live Oak Associates, Inc. 2018) determined that five special-status animal species may be present, including Sacramento splittail (*Pogonichthys macrolepidotus*), North harrier (*Circus cyaneus*), Big free-tailed bat (*Nyctinomops macrotis*), Townsend's Big-eared bat (*Corynorhinus townsendii*), and Pallid bat (*Antrozous pallidus*).

The Biological Assessment included a review of federal and state databases for the presence of potentially occurring special-status plant and animal species. The results were compiled from searches of various sources including the California Natural Diversity Database (CNDDDB), the California Department of Fish and Wildlife (CDFW), and the California Native Plant Society (CNPS).

DISCUSSION OF IMPACTS

- a) *Less Than Significant Impact with Mitigation.* Within the general region, 30 special status animal species have been known to occur, or once occurred. Of these, 25 are absent from or unlikely to occur on the project site due to unsuitable habitat conditions. The remaining five species may occur more frequently as regular foragers or may be resident on the site, including Sacramento splittail, northern harrier, Townsend's big-eared bat, big free-tailed bat and pallid bat. Additionally, mitigation measures have been included for the burrowing owl, though listed as unlikely to occur on this site.

These species either occur on the site incidental to home range and migratory movements, thus using the site infrequently, or may forage on the site year-round or during migration. Project buildout would have a minimal effect on the breeding success of these species and would, at most, result in a relatively small reduction of foraging and/or nesting habitat that is abundantly available regionally. Therefore, the loss of habitat for these species would be considered less than significant.

Construction activities may result in injury of individuals of these species, which would be considered significant. Mitigation measures **BIO-1 through BIO-4** include minimization and avoidance protocols to protect special-status species discovered on the project site and to reduce impacts to less than significant levels.

- b) *Less Than Significant Impact with Mitigation.* A formal wetland delineation of the site was not conducted as a part of this evaluation. No wetlands were observed on the site during the November 2018 survey, however, potential jurisdictional waters are present off-site in the form of Matson Creek, an intermittent creek, located at the intersection of Hubbard Avenue and Matson Creek. A proposed overflow and outfall would empty into this creek. This hydrological feature would be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) and any fill being placed within the creek as a result of the project would require permits from some or all of these agencies. Additionally, impacts to the bed, bank or associated woody riparian vegetation may be considered a significant impact under CEQA.

Should the project require impacts within the bed and bank of the creek, or disturbance to woody riparian vegetation, the project should implement avoidance of all waters of the U.S. and State by designing the project so that it avoids placement of fill within potential jurisdictional waters and impacts to riparian habitat. Mitigation measures **BIO-5** include minimization and avoidance protocol to protect aquatic and riparian habitats.

- c) *No Impact.* No wetlands or other federally regulated waters are located on the site.
- d) *Less Than Significant Impact.* There are no waters or streams present on the site. Thus, the project would not impact native resident or migratory fish or migration corridors. Construction activities could temporarily disturb foraging activities. However, the loss of potential foraging habitat would be relatively insignificant compared to available foraging habitat adjacent to the project site. Because of the site's developed nature, construction activities would not contribute to habitat fragmentation or a loss of foraging habitat for wildlife species. This impact would be less than significant.
- e) *Less Than Significant Impact with Mitigation.* The proposed project may require the removal of trees. The number of trees to be removed will depend on the final project

plans. The removal of protected trees would constitute a significant impact. The City of Pleasant Hill requires a permit to remove protected trees or Heritage trees (Municipal Code Section 18.110). The project would require a tree removal permit. Mitigation measures **BIO-6** include preservation and replacement measures. Because the project would be required to comply with the City's tree preservation ordinance, impacts resulting from conflicts with local policies or ordinances protecting biological resources would be less than significant.

- f) *No Impact.* The habitats of the site are likely to comprise only a portion of most wildlife's entire home range or territory. As such, some species may disperse through the site, but most wildlife presently using the site do so as part of their normal movements for foraging, mating, and caring for young. Wildlife species presently occupying the site would be displaced or lost from the proposed development area.

The proposed project, when considered by itself, will neither result in a wildlife population dropping below self-sustaining levels nor threaten to eliminate an animal community. Furthermore, mitigations have been proposed for a number of species previously discussed to adequately offset habitat loss. Therefore, impacts to native wildlife due to the loss of habitat resulting from the proposed project are considered less than significant under CEQA.

Mitigation Measures

BIO-1 Disturbance to Nesting Raptors and Migratory Birds

- To the maximum extent practicable, trees planned for removal should be removed during non-breeding season (September 1 through January 31). If it is not possible to avoid tree removal or other disturbances during breeding season (February 1 through August 31), a qualified biologist should conduct a pre-construction survey for tree-nesting raptors and other tree- or ground-nesting migratory birds in all trees or other areas of potential nesting habitat within the construction footprint and within 250 feet of the footprint, if such disturbance will occur during the breeding season. This survey should be conducted no more than 14 days prior to the initiation of demolition/construction activities during the breeding season.

If nesting raptors or migratory birds are detected on the site during the survey, a suitable construction-free buffer should be established around all active nests. The precise dimensions of the buffer (up to 50 feet) would be determined at that time and may vary depending on location and species. Buffers should remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are independent of their parents. Pre-construction surveys during the non-breeding season are not necessary, as the birds are expected to abandon their roosts during construction activities. Implementation of the above measures would mitigate impacts to tree-nesting raptors and other migratory birds to a less-than-significant level.

BIO-2 Impacts to Burrowing Owls

- In order to avoid impacts to active burrowing owl nests, a qualified biologist should conduct pre-construction surveys for burrowing owls according to the

CDFW's *Staff Report on Burrowing Owl Mitigation* within the construction footprint and within 250 feet of the footprint with the first survey no more than 14 days prior to the onset of ground disturbance and the last survey within 24 hours prior to ground disturbance. These surveys should be conducted in a manner consistent with accepted burrowing owl survey protocols if burrowing owl nests are observed.

BIO-3 Impacts to Sacramento Splittail

- As the creek is ephemeral and overflow and outfall work should be able to be completed fairly quickly, work should be conducted in the creek only between April 16 and October 14 during the non-rainy season and when the creek channel is dry.

BIO-4 Impacts to Bats

- A bat assessment should be conducted outside of maternity season and outside of overwintering season when humane eviction can occur (March 1-April 15 or August 15-October 15). Should trees be planned for removal, this is the season when they should be removed after a bat assessment. Tree removal and humane eviction, should be done as a two-step removal under the direction of a qualified biologist.

BIO-5 Disturbance to Waters of the United States or Riparian Habitats

- Should the project require impacts within the bed and bank of the creek, or disturbance to woody riparian vegetation, the project should implement avoidance, minimization, and/or compensation measures to reduce impacts to jurisdictional waters and riparian habitats to a less-than-significant level.
 - Avoidance
The preferred method of mitigation would be avoidance of all waters of the U.S. and State by designing the project so that it avoids the placement of fill within potential jurisdictional waters (off-site at Matson Creek) and impacts to riparian habitat.
 - Minimization
If full avoidance is not possible, actions should be taken to minimize impacts to aquatic and riparian habitats. The project should be designed to the extent possible to minimize impacts to the most sensitive aquatic habitat by not impacting the creek within the Ordinary High Water (OHW) channel and to minimize removal of woody riparian vegetation. Measures taken during construction activities should include placing construction fencing around the riparian areas to be preserved to ensure that construction activities do not inadvertently impact these areas.

As part of project build-out, all proposed lighting near the riparian corridor should be designed to avoid light and glare impacts to the riparian corridor to be avoided. Light sources should not be visible from riparian areas and should not illuminate riparian areas or cause glare on the opposite side of the channels (e.g., to neighboring properties). Additionally, proposed development activities should be designed and

situated to avoid the loss of trees within any riparian areas to the maximum extent practicable.

- Compensation

If significant impacts to the riparian corridor cannot be avoided, then an onsite restoration plan should be developed to compensate for impacts. It is expected that all mitigation measures can be accommodated on the site. If the preserved area cannot fully accommodate the mitigation measures, then off-site restoration would be necessary. Mitigation measures would either result in the creation of new habitat as replacement for habitat lost or enhance the quality of existing habitat for native plants and wildlife. Mitigation measures should include replacement of riparian habitat as well as reseeded or replanting of vegetation in temporarily disturbed areas according to a site-specific mitigation plan. At a minimum, this plan should identify mitigation areas, a planting plan, site maintenance activities, success criteria and remedial measures to compensate for lack of success. The mitigation goal should be to create and enhance riparian habitats with habitat functions and values greater than or equal to those existing in the impact zone.

A detailed monitoring plan, including specific success criteria, should be developed and submitted to permitting agencies during the permit process. The mitigation area would be monitored in accordance with the plan approved by those permitting agencies. The basic components of the monitoring plan consist of final success criteria, performance criteria, monitoring methods, data analysis, as-built plans, monitoring schedule, contingency/remedial measures, and reporting requirement.

A Habitat Mitigation and Monitoring Plan should be prepared as noted **(Appendix Bio)**.

BIO-6 Tree Removal Impacts

- A tree preservation and replacement plan should be prepared for the project identifying all protection and mitigation measures to be taken. These measures should remain in place for the duration of construction activities at the project site. Replacement trees are required. The tree ordinance includes a section for subdividers which states, "A subdivider or developer need not obtain a separate tree removal permit to remove, relocate or demolish a tree designated as "To Be Removed" on an approved subdivision map (tentative map or parcel map) or development plan provided that the tree removal has been reviewed and approved by the decision-making body for the subdivision map and/or development plan based on the criteria in subsection A.3 of this section and a tree preservation and replacement plan has been approved pursuant to subsection C of this section."

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.5 CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SETTING

The analysis in this section is based on a Cultural Resources Survey prepared for the project (Native-X, Inc. Archaeological Services 2018). The project area is located within a residential area, along McKissick Street. The proposed project includes the development of the parcel into a small subdivision and construction of four single-family homes. It also includes the installation of a storm drain along existing McKissick Street and Hubbard Avenue. Storm drain installation will occur by excavating a trench in the already existing gravel and asphalt roads. The approximately 1.19 acre parcel and the storm drain installation are considered the Area of Potential Effect (APE). No structures exist on the parcel. The project will included ground disturbing activities that have the potential to impact cultural resources. The project is located within the city of Pleasant Hill on the unsectioned USGS 7.5' Walnut Creek 1995 quadrangle (T.1N., R.2W). The center of the parcel is located at 571213 mE x 4199698 mN (NAD83). The report is included as **Appendix CUL**.

Records Search

In November 2018, a records search was conducted by the Northwest Information Center, California Historical Resources Information System (File #18-0907) for the proposed project area or within a 0.5 mile radius. No previously known resources were found to exist within the project area or within 0.5 mile. Seven other studies have been conducted within 0.5 mile of the project site.

Summary and Recommendations

Native-X, Inc. Archeological Services conducted a cultural resources study of an undeveloped parcel located in Pleasant Hill, Contra Costa County, California. The project area is located within a residential area, along McKissick Street. The proposed project includes the developments of the parcel into a small subdivision and the construction of four new single-family homes. It also includes the installation of a storm drain along existing McKissick Street and Hubbard Avenue.

The APE was surveyed on December 2, 2018. No prehistoric or historic archaeological resources were located during the course of the survey. No built environment resources exist within the APE. The proposed project will have no effect on any known significant archaeological or built environment resources.

If during project implementation unrecorded archaeological material is observed, it is recommended that project activities cease in the area of the find and that a qualified archaeologist be contacted to assess its significance.

DISCUSSION OF IMPACTS

- a, b) *No Impact.* There are no historical or archaeological resources located on the project site.
- c) *No Impact.* There are no cultural resources located on the project site.
- d) *Less Than Significant Impact with Mitigation.* Should unrecorded paleontological resource, site, unique geological feature or human remains be observed during implementation of the project, activities shall cease in the area of the find and a qualified archaeologist shall be contacted to assess its significance.

Mitigation Measures

CUL-1 Treatment of previously unidentified archaeological deposits.

- In the event a potentially significant cultural resource is encountered during subsurface earthwork activities, all construction activities within a 100-foot radius of the find shall cease and workers shall avoid altering the materials until an archaeologist has evaluated the situation. The Applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Potentially significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resource, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Any previously undiscovered resources found during construction within the Project Site shall be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and will be submitted to the City of Pleasant Hill, the Northwest Information Center, and the State Historic Preservation Office (SHPO), as required.

CUL-2 Stop Construction upon Encountering Human Remains

- In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5, Health and Safety Code Section 7050.5, and Public Resources Code Sections 5097.94 and Section 5097.98 shall be followed. If during the course of project construction, there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance within 100 feet of the remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the MLD of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resource Code Section 5097.98.

2. Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance:
 - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
 - The descendant identified fails to make a recommendation.
 - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.6 GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:				
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

This analysis is based on the project-specific geotechnical investigation conducted by The Sutton Group in mid-2018 in the fifth successive year of a drought cycle. The investigation included subsurface exploratory drilling at three boring sites to a maximum depth of 40 feet. The report is included as **Appendix GEO**.

The project site is rectangular in shape and gently slopes from the northwest downward toward the southwest on a 5% gradient. The site was a former walnut grove; a majority of the trees are now gone, and there are several other volunteer trees. The site has a surface cover of waist-high grasses.

Surface Soils

Surface soils on the project site are mapped as Tierra Series and assigned to Hydrologic Soil Group D by the NRCS. Borings suggest that the land has been graded. The Tierra soils, with a profile of about 60" thick, are moderately well drained clay loams with slow permeability. These very sandy, lean clays (borderline clay-silt) have sandy clays of higher plasticity (**see Appendix GEO**).

Subsurface Soils

In some locations the near-surface soils appeared to be disturbed, suggesting that minor grading has occurred. At 2 to 3 feet depth, the soil ranged from sandy lean clay to sandy silt, although a lens of fat clay was present at from 2 to 6 feet. Stiff to hard, sandy, lean clay and sandy silt was predominant in the borings, except for a layer of medium dense, well graded sand at 10 ½ to 14 feet depth. A 3-foot thick layer of medium dense, poorly graded (medium), silty sand was present below 30 feet depth. Moisture content increased with depth, although calculations indicate that the soil was not saturated until a depth of 28 feet.

Test results indicate that these soils have low to moderately high plasticity, with Liquid Limit in the range 35 to 59 and Plasticity Index in the rang 13 to 38, but the majority of soil underlying the property would have a Plasticity Index of about 20.

The surficial clays are typically moderately expansive but those deeper are moderately to highly expansive. The deeper Tierra series clays are also moderately corrosive to concrete and to buried metal objects. Dense, good quality, structural concrete is typically unaffected by local soil corrosivity.

Groundwater

Groundwater was not encountered in the borings as they did not remain open long enough for water level to stabilize before they were backfilled. Saturation moisture content was calculated from the density/moisture tests and conclude that saturation would be at about 28 feet depth. Tests also noted that the moisture content of these clays indicate that the upper 10 feet are desiccated, no doubt due to drought.

Geology and Seismicity

There are no active earthquake faults in the immediate vicinity of the property; the nearest active fault is approximately 2.5 miles away. The approximate direction and distance from the site to active faults within 15 miles of the project are summarized in **Table 4.6-1**.

**TABLE 4.6-1
ACTIVE FAULTS WITHIN 15 MILES OF THE PROJECT SITE**

Fault Name	Project Site Distance to Fault (miles)	Direction
Concord	4.0	Northeast
Calaveras	11	Southeast
Hayward	11	Southwest
San Andreas	30	Southwest

Source: Sutton 2018

Liquefaction/Lateral Spreading

Liquefaction is the loss of soil strength when saturated, granular soil (relatively clean sand) is agitated in a strong earthquake, so that it becomes a liquid, losing its shear strength and thus support capability. Strain softening is the softening of saturated, soft clay-rich soil due to seismic agitation, also resulting in loss of shear strength and support capability. Lateral spreading is another related seismic-caused condition, which occurs when agitated higher ground, underlain by liquefied materials, "floats" on the liquefied layer, then slides laterally into an adjacent void, such a creek channel.

The Contra Costa County GIS map database indicates the southeasterly part of the property, including the proposed southeasterly lot, and parts of the adjoining planned lots, to be in a liquefaction hazard zone. The ABAG Liquefaction Potential Map (ABAG 2014) indicates the site vicinity to have low liquefaction, strain softening, and lateral spreading of the developed lots (see **Appendix Geo**).

REGULATORY FRAMEWORK

City of Pleasant Hill General Plan

The General Plan Safety and Noise Element includes goals and programs to address geological and seismic hazards. These policies and programs applicable to the project are as follows:

Safety and Noise Goal 3. Reduce potential harm to people and property from geologic/seismic hazards.

Safety and Noise Policy 3A. Ensure that structures are designed and located to withstand strong ground shaking, liquefaction and seismic settlement.

Safety and Noise Program 3.2. Require geotechnical studies for development in areas with moderate to high liquefaction potential that include analysis of seismic settlement potential and specify appropriate mitigation.

DISCUSSION OF IMPACTS

a)

- i. *No Impact.* The property is approximately 2.5 miles from the nearest active fault; ground breakage on the property is most unlikely.
- ii. *Less Than Significant Impact.* The property is situated in the seismically active San Francisco Bay Area, which has numerous active faults. A moderate to strong earthquake event on any one of the active faults will severely shake every structure in the entire region. Even newly built houses, engineered, and built in accordance with the most recent building code provisions, can be expected to be damaged to some degree by a strong earthquake.
- iii. *Less Than Significant Impact.* The Contra Costa County GIS map database indicates the southeasterly part of the property, including the proposed southeasterly lot, and parts of the adjoining planned lots, to be in a liquefaction hazard zone. A specific investigation for liquefiable soils was conducted which analyzed liquefaction, strain softening, and lateral spreading of the developed lots, under the seismic event, due to existing cut

slope and developed lots just beyond the south boundary. The review results in a low risk to the proposed houses by liquefaction and lateral spreading. Houses built on this property, with foundation systems engineered in accordance with the report recommendations, and the building code are unlikely to suffer significant structural damage from liquefaction or lateral spreading at the design seismic event level, but underground utilities would be disconnected.

- iv. *Less Than Significant Impact.* The existing cut slope down to lots developed just beyond the south boundary in the 1960s are at 2:1 flatter slopes, and based on borings, the cuts are in stiff clay, with groundwater at least 20 feet deep. As such the risk of landsliding to the planned development or to adjacent properties is of very low significance.
- b) *Less Than Significant Impact.* As stated in the report, the property was previously graded to create the orchard, and topsoil was not present. The Tierra series soils present on the property surface (contrary to SCS report's map), are moderately well drained clay loams with slow permeability. As the present and proposed site grades are relatively level, and the developed lots can be expected to be protectively surfaced soon after development, these soils will present low erosion potential.
- c) *Less Than Significant Impact.* As described in the response to items a-iii and a-iv above, the ground is acceptably stable. The proposed houses will be setback from the property boundaries, so the proposed development will not impact adjacent properties, rather it will contribute to enhancing their stability.
- d) *Less Than Significant Impact with Mitigation.* The soils on this property are the expansive clays ubiquitous to Central Contra Costa County. As such, the geotechnical report addresses and presents the industry-standard recommendations for engineered controls for site grading, foundation design, and managing the soils' expansive characteristics, both by the developer and by future homeowners.
- e) *No Impact.* As the houses of the developed property will be served by CCSD sewer, there will be no septic tanks or alternative wastewater management.

Mitigation Measures

GEO-1 Mitigations for expansive soil during site grading include stripping of topsoil, filling of pits after the trees are removed, and minor excavations and placement of minor fills to level the building pads and roadway. The native clayey soils should be suitable for construction of site fills if they are constructed as engineered fills in accordance with the recommendations below (see Appendix GEO).

On-site soils should be placed and tested under the oversight of the Geotechnical Engineer's representative. Cull any rock or concrete chunks greater than 3 inches in size, as well as any organic or otherwise deleterious matter. No more than 20 percent by weight should exceed 1½ inches size. Clay-rich soils should be moisture conditioned in advance of placement, and placed at between +2 and +5 percent wet of optimum. Compact the on-site or similar clay as engineered fill to no less than 88 percent and no greater than 92 percent of maximum dry density, at between +2 and +5 percent over the optimum moisture content.

Foundation designs suitable for expansive soil include post-tensioned slab of at least 12 inches thick. The house pads for post tensioned slab foundations should be cross-scarified, moisture conditioned, and re-compacted as an engineered fill to provide uniform bearing.

A slab foundation bottoming on the site clay or on engineered fill comprised of the site clay prepared as herein may be designed using an maximum allowable bearing pressure of 1,500 pounds per square foot (psf) of contact surface for dead and long term live loads, which pressure may be increased by one third for transient (wind or seismic) loads. The soil so prepared may be designed using a modulus of subgrade reaction (k) of 50pci (pounds per square inch, per inch of deflection). If a slab with edge or interior beams, such as the Wafflemat® system⁴, is to be used, grade beams for the waffle slab, whether pre-stressed or conventionally designed, should be at least 12 inches wide beneath bearing walls. Other beams of a waffle type slab system may be narrower but we recommend not less than 6 inches wide.

If a moisture barrier is to be laid to protect floor finishes, we recommend it be a flexible membrane at least 15 mils thick such as Stego®Wrap complying with ASTM E1745 "Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs". It should be placed in accordance with ASTM E1643 "Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs".

Mitigations for managing the home sites for expansive soil characteristics include grading to ensure that surface waters are directed away from the house and other structures, and adopting the Building Code grades as a minimum.

Grade new concrete paving to intercept surface waters and direct them to inlet basins and/or strip drains. Direct roof downspouts to this in-ground piped drainage system. Use 4" diameter, rigid-walled, PVC non-perforated, drainage pipe (Class SDR 35 or stronger), with glued joints, to discharge at the lowest elevations possible towards the downslope site boundaries. To control erosion at the outlet provide a gravel bed similar to the detail herein or seed with straw wattle. Screw a drain grate to the outlet end(s) to preclude rodent entry to the pipes. If "bubble-ups" must be used, site them and their drywell bleed pits down gradient of, and at least 10 feet distant from any structure.

Landscaping and plantings will be necessary on all bare ground to avoid erosion. Garden and lawn irrigation water is a leading source of foundation water. Periodically look for overly wet soil, heaved or depressed paving, distressed plants and presence of moss as problem indicators. Observe the system periodically, minimize watering time, and observe that spray heads are properly directed, and not directed against building walls. Dry-climate plantings and irrigation systems, such as drip irrigation significantly reduce the potential for over-watering, however they must be maintained.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.7 GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

Greenhouse gases (GHGs) are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities as well as many natural processes. This release of gases, such as carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. **Table 4.7-1** describes the primary GHGs attributed to global climate change, including a description of their physical properties and primary sources.

**TABLE 4.7-1
GREENHOUSE GASES**

Greenhouse Gas	Description
Carbon dioxide (CO ₂)	CO ₂ is a colorless, odorless gas and is emitted in a number of ways, both naturally and through human activities. The largest source of CO ₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. The atmospheric lifetime of CO ₂ is variable because it is so readily exchanged in the atmosphere. ¹
Methane (CH ₄)	CH ₄ is a colorless, odorless gas that is not flammable under most circumstances. CH ₄ is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH ₄ is emitted from both human-related and natural sources. Methane’s atmospheric lifetime is about 12 years. ²
Nitrous oxide (N ₂ O)	N ₂ O is a clear, colorless gas with a slightly sweet odor. N ₂ O is produced by natural and human-related sources. Primary human-related sources are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. The atmospheric lifetime of N ₂ O is approximately 120 years. ³

Sources: ¹EPA 2011a, ²EPA 2011b, ³EPA 2010

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Estimates of GHG emissions are commonly presented in carbon dioxide equivalents (CO₂e), which weigh each gas by its global warming potential. Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted. GHG emissions quantities in this analysis are presented in metric tons (MT) of CO₂e.

GHG emissions contribute, on a cumulative basis, to significant adverse environmental impacts. While no single project could generate enough GHG emissions to noticeably change the global average temperature, the combination of GHG emissions from past, present, and future projects contributes substantially to the phenomenon of global climate change and its associated environmental impacts, and as such, are addressed only as a cumulative impact.

The State of California has adopted various administrative initiatives and legislation relating to climate change, much of which set aggressive goals for GHG emissions reductions in the state. These guidelines are summarized below.

California Global Warming Solutions Act (Assembly Bill 32)

The primary acts that have driven GHG regulation and analysis in California include the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599), which instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The act directed CARB to set a greenhouse gas emissions limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020.

AB 32 Scoping Plan

AB 32 requires CARB to update the Scoping Plan at least once every five years. CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG reduction necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. The Scoping Plan update also looks beyond 2020 toward the 2050 goal established in Executive Order S-3-05, though not yet adopted as state law, and observes “a mid-term statewide emission limit will ensure that the State stays on course to meet our long-term goal.” The Scoping Plan update does not establish or propose any specific post-2020 goals, but it identifies such goals adopted by other governments or recommended by various scientific and policy organizations. CARB is moving forward with a second update to the Scoping Plan to reflect the 2030 target (40 percent below 1990 levels) set by Executive Order B-30-15 and codified by Senate Bill 32.

Senate Bill 32

In August 2016, Governor Brown signed Senate Bill (SB) 32 (Amendments to California Global Warming Solutions Action of 2006), which extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emissions reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by Executive Order B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in Executive Orders S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050. As of the date of publication of this document, no specific policies or emissions reduction mechanisms have been established.

California Executive Orders

California Executive Order S-03-05 (2005) and Executive Order B-30-15 (2015) highlight GHG emissions reduction targets, although such targets have not been adopted by the State and remain only a goal of the Executive Orders. Specifically, Executive Order S-03-05 seeks to achieve a reduction of GHG emissions of 80 percent below 1990 levels by 2050, and Executive Order B-30-15 seeks to achieve a reduction of GHG emissions of 40 percent below 1990 levels by

2030. The Executive Orders are not laws but do provide the governor's direction to state agencies in their actions to reinforce existing laws. For instance, as a result of the AB 32 legislation, the State's 2020 reduction target is backed by the adopted AB 32 Scoping Plan, which provides a specific regulatory framework of requirements for achieving the 2020 reduction target.

Bay Area Air Quality Management District

The BAAQMD (2017a) provides direction and recommendations for the analysis of GHG impacts of a project and approach to mitigation measures in its CEQA Guidelines. The guidance provided in the handbook was used to prepare this analysis. The BAAQMD's (2017b) CEQA Guidelines provide three options for evaluating the impact of a project's operational GHG emissions.

- 1) Meet all screening criteria for the land use type listed in Table 3-1 of the BAAQMD CEQA Guidelines; or
- 2) Be located in a community with an adopted qualified GHG Reduction Strategy and the project identifies and implements all applicable feasible measures and policies from the strategy; or
- 3) Have estimated GHG operational emissions that are quantified and fall below the bright-line threshold of significance of 1,100 metric tons of CO₂e per year or the efficiency threshold of significance of 4.6 metric tons of CO₂e per service population per year.

The BAAQMD recommends that lead agencies determine appropriate air quality thresholds to use for each project they review based on substantial evidence that they should include in the administrative record for the project. The BAAQMD (2009) provides the CEQA Thresholds Options and Justification Report developed by staff in 2009 for determining appropriate thresholds.

Plan Bay Area 2040

As required by the Sustainable Communities and Climate Protection Act of 2008 (SB 375), ABAG and the Metropolitan Transportation Commission (MTC) have developed a Sustainable Communities Strategy (SCS) as a component of Plan Bay Area 2040 (MTC and ABAG 2017). This plan seeks to reduce GHG and other mobile source emissions through coordinated transportation and land use planning to reduce vehicle miles traveled (VMT).

DISCUSSION OF IMPACTS

- a) *Less Than Significant Impact.* The project's GHG emissions would include short-term emissions from construction activities (primarily emissions from equipment exhaust) and long-term regional emissions from project operation. Operational emissions would include those associated with new vehicular trips and indirect source emissions, such as electricity use, energy resulting from water use, and emissions resulting from solid waste collection and disposal.

The BAAQMD has developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether a project could result in potentially significant greenhouse gas emissions impacts. Projects below the applicable screening criteria shown in Table 3-1 of the BAAQMD's (2017b) CEQA Guidelines would not exceed the 1,100 MT of CO₂e per year GHG threshold of significance for projects other than

permitted stationary sources. The operational GHG screening level indicated in Table 3-1 of the BAAQMD CEQA Guidelines for land use development of single-family homes is 56 dwelling units. The project proposes to develop four dwelling units. Therefore, the project would not exceed the BAAQMD project-level threshold for GHG emissions during operations, and impacts would be less than significant. *Less Than Significant Impact.*

- b) *Less Than Significant Impact.* The project is an approximately 1.19-acre residential development in Pleasant Hill. The existing zoning for the project site is R-10, which allows a maximum development potential of 4.5 dwelling units per acre, resulting in 4 homes. Therefore, the project would not exceed the development intensity allowed in the current zoning, and the anticipated population increase would be within the growth projections assumed in the City's General Plan. These growth projections are used in development of GHG inventories for the Bay Area in Plan Bay Area 2040 (MTC and ABAG 2017) to meet the requirements of AB 32, SB 32, and SB 375. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG. Impacts would be less than significant.

Mitigation Measures

None required.

4.0 ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.8 HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

This analysis includes information provided in the Phase I Environmental Site Assessment (Chico Environmental Science & Planning 2017) prepared for the project (**Appendix HAZ.**)

The site is situated south of McKissick Street between Hubbard Avenue and Oakvue Road in southwest Pleasant Hill, Contra Costa County, California. The site is currently vacant and consists of a non-producing walnut orchard in a single-family residential neighborhood.

Hazardous Materials Regulation

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency.

Most hazardous material regulation and enforcement in Contra Costa County is managed by the Contra Costa County Health Services Department, Hazardous Materials Division, which refers large cases of hazardous materials contamination or violations to the San Francisco Bay Regional Water Quality Control Board (RWQCB) and/or the California Department of Toxic Substances Control (DTSC). The City of Pleasant Hill implements its own programs regarding hazardous materials use and incident response.

Hazardous Materials Sites

Chico Environmental reviewed information gathered from several environmental databases through Environmental Data Resources (EDR) to evaluate whether activities on or near the subject property have the potential to impact environmental conditions at the subject property.

The project site is in an urban, developed area; there are 103 sites identified on EDR within 1 mile of the project site. Most of the sites are completed leaking underground storage tank cases, as listed in **Table 4.8-1**.

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4.0 ENVIRONMENTAL CHECKLIST

TABLE 4.8-1: ENVIRONMENTAL DATA RESOURCES RESULTS SUMMARY

STANDARD ENVIRONMENTAL DATABASES	SURVEY DISTANCE	OCCURANCES
United States Environmental Protection Agency (EPA) National Priority List (NPL) for Superfund Sites	1.0 mile	0
United States Environmental Protection Agency (EPA) National Priority List for Proposed Superfund Sites (Proposed NPL)	1.0 mile	0
United States Environmental Protection Agency (EPA) National Priority List Liens for Superfund Sites (NPL Liens)	Target Property	0
United States Environmental Protection Agency (EPA) National Priority List for Delisted Superfund Sites (Delisted NPL)	1.0 mile	0
U.S. EPA Comprehensive Environmental Response, Compensation and Liability Index System (CERCLIS) List	0.5 miles	0
U.S. EPA CERCLIS No Further Remedial Action Planned (NFRAP) List	0.5 miles	0
U.S. EPA Resource Conservation and Recovery Act (RCRA) Corrective Action (CORRACTS) List	1.0 mile	0
U.S. EPA RCRA Permitted Treatment, Storage, and Disposal Facilities (RCRA-TSDF)	0.5 miles	0
Federal RCRA Generators List-LQG	0.25 miles	0
Federal RCRA Generators List-SQG	0.25 miles	0
Federal RCRA Generators List-CESQG	0.25 miles	0
Federal Engineering Controls Registries (US ENG CONTROLS)	0.5 miles	0
Federal Institutional Controls Registries (US INST CONTROLS)	0.5 miles	0
Local Land Records (LUCIS)	0.5 miles	0

4.0 ENVIRONMENTAL CHECKLIST

TABLE 4.8-1: ENVIRONMENTAL DATA RESOURCES RESULTS SUMMARY

STANDARD ENVIRONMENTAL DATABASES	SURVEY DISTANCE	OCCURANCES
U.S. EPA Emergency Response Notification System (ERNS) List	Target Property	0
State - and Tribal - Equivalent NPL (CA RESPONSE)	1.0 miles	0
State - and Tribal - Equivalent CERCLIS (ENVIROSTOR)	1.0 miles	0
State and tribal landfill and/or solid waste disposal site lists (SWF/LF)	0.5 miles	0
State – and Tribal - Leaking Underground Storage Tank List (LUST)	0.5 miles	2
State – and Tribal - Leaking Underground Storage Tank List (SLIC)	0.5 miles	0
State – and Tribal - Leaking UST List (INDIAN LUST)	0.5 miles	0
State – and Tribal – registered storage tank list (UST)	0.25 miles	0
State – and Tribal – registered storage tank list (AST)	0.25 miles	0
State – and Tribal – registered storage tank list (INDIAN UST)	0.25 miles	0
State – and Tribal – registered storage tank list (FEMA UST)	0.25 miles	0
State – and Tribal – voluntary cleanup sites (VCP)	0.5 miles	0
State – and Tribal – voluntary cleanup sites (INDIAN VCP)	0.5 miles	0
Local Brownfield Lists (US BROWNFIELDS)	0.5 miles	0
Local Lists of Landfill / Solid Waste Disposal Sites (ODI)	0.5 miles	0
Local Lists of Landfill / Solid Waste Disposal Sites (DEBRIS REGION 9)	0.5 miles	0

4.0 ENVIRONMENTAL CHECKLIST

TABLE 4.8-1: ENVIRONMENTAL DATA RESOURCES RESULTS SUMMARY

STANDARD ENVIRONMENTAL DATABASES	SURVEY DISTANCE	OCCURANCES
Local Lists of Landfill / Solid Waste Disposal Sites (WMUDS/SWAT)	0.5 miles	0
Local Lists of Landfill / Solid Waste Disposal Sites (SWRCY)	0.5 miles	0
Local Lists of Landfill / Solid Waste Disposal Sites (HAULERS)	Target Property	0
Local Lists of Landfill / Solid Waste Disposal Sites (INDIAN ODI)	0.5 miles	0
Local Lists of Hazardous waste / Contaminated Sites (US CDL)	Target Property	0
Local Lists of Hazardous waste / Contaminated Sites (HIST Cal-Sites)	1.0 mile	0
Local Lists of Hazardous waste / Contaminated Sites (SCH)	0.25 miles	0
Local Lists of Hazardous waste / Contaminated Sites (TOXIC Pits)	1.0 mile	0
Local Lists of Hazardous waste / Contaminated Sites (CDL)	Target Property	0
Local Lists of Hazardous waste / Contaminated Sites (US HIST CDL)	Target Property	0
Local Lists of Registered Storage Tanks (CA FID UST)	0.25 miles	0
Local Lists of Registered Storage Tanks (HIST UST)	0.25 miles	0
Local Lists of Registered Storage Tanks (SWEEPS UST)	0.25 miles	0
Local Land Records (LIENS 2)	Target Property	0
Local Land Records (LIENS)	Target Property	0
Local Land Records (DEED)	0.5	0
Records of Emergency Release Reports (HMIRS)	Target Property	0

4.0 ENVIRONMENTAL CHECKLIST

TABLE 4.8-1: ENVIRONMENTAL DATA RESOURCES RESULTS SUMMARY

STANDARD ENVIRONMENTAL DATABASES	SURVEY DISTANCE	OCCURANCES
Records of Emergency Release Reports (CHMIRS)	Target Property	0
Records of Emergency Release Reports (LDS)	Target Property	0
Military Cleanup Sites (MCS)	Target Property	0
Spills 90 Data from First Search (SPILLS 90)	Target Property	0
RCRA-NonGen	0.25 miles	0
Incident and Accident Data (DOT OPS)	Target Property	0
Department of Defense Sites (DOD)	1.0 miles	0
Formerly Used Defense Sites (FUDS)	1.0 miles	0
Superfund (CERCLA) Consent Decrees (CONSENT)	1.0 miles	0
Records Of Decision (ROD)	1.0 miles	0
Uranium Mill Tailings Sites (UMTRA)	0.5 miles	0
Mines Master Index File (US MINES)	0.25 miles	0
Toxic Chemical Release Inventory System (TRIS)	Target Property	0
Toxic Substances Control Act (TSCA)	Target Property	0
FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide (FTTS)	Target Property	0
FIFRA/TSCA Tracking System Administrative Case Listing (HIST FTTS)	Target Property	0
Section 7 Tracking Systems (SSTS)	Target Property	0

4.0 ENVIRONMENTAL CHECKLIST

TABLE 4.8-1: ENVIRONMENTAL DATA RESOURCES RESULTS SUMMARY

STANDARD ENVIRONMENTAL DATABASES	SURVEY DISTANCE	OCCURANCES
Integrated Compliance Information System (ICIS)	Target Property	0
PCB Activity Database System (PADS)	Target Property	0
Material Licensing Tracking System (MLTS)	Target Property	0
Radiation Information Database (RADINFO)	Target Property	0
Facility Index System/Facility Registry System (FINDS)	Target Property	0
RCRA Administrative Action Tracking System (RAATS)	Target Property	0
Risk Management Plans (RMP)	Target Property	0
Bond Expenditure Plan (CA BOND EXP. PLAN)	1.0 miles	0
UIC Listing (UIC)	Target Property	0
NPDES Permits Listing (NPDES)	Target Property	0
"Cortese" Hazardous Waste & Substances Sites List (Cortese)	0.5 miles	0
Historical "Cortese" Hazardous Waste & Substances Sites List (HIST CORTESE)	0.5 miles	2
CUPA Resources List (CUPA Listings)	0.25 miles	0
Proposition 65 Records (Notify 65)	1.0 miles	0
DRYCLEANERS	0.25 miles	0
Well Investigation Program Case List (WIP)	0.25 miles	0
Enforcement Action Listing (ENF)	Target Property	0

4.0 ENVIRONMENTAL CHECKLIST

TABLE 4.8-1: ENVIRONMENTAL DATA RESOURCES RESULTS SUMMARY

STANDARD ENVIRONMENTAL DATABASES	SURVEY DISTANCE	OCCURANCES
Facility and Manifest Data (HAZNET)	Target Property	0
Emissions Inventory Data (EMI)	Target Property	0
Indian Reservations (INDIAN RESERV)	1.0 miles	0
State Coalition for Remediation of Drycleaners Listing (SCRD DRYCLEANERS)	0.5 miles	0
Waste Discharge System (WDS)	Target Property	0
EPA Watch List (EPA WATCH LIST)	Target Property	0
2020 Corrective Action Program List (2020 CORRECTIVE ACTION)	0.25 miles	0
Lead Smelter Sites (LEAD SMELTERS)	Target Property	0
Financial Assurance Information Listing (FINANCIAL ASSURANCE)	Target Property	0
PCB Transformer Registration Database (PCB TRANSFORMER)	Target Property	0
Coal Combustion Residues Surface Impoundments List (COAL ASH EPA)	0.5 miles	0
Financial Assurance Information (US FIN ASSUR)	Target Property	0
Aerometric Information Retrieval System Facility Subsystem (US AIRS)	Target Property	0
Potentially Responsible Parties (PRP)	Target Property	0
PROC (Certified Processors Database)	0.5 miles	0
Medical Waste Management Program Listing (MWMP)	0.25 miles	0

TABLE 4.8-1: ENVIRONMENTAL DATA RESOURCES RESULTS SUMMARY

STANDARD ENVIRONMENTAL DATABASES	SURVEY DISTANCE	OCCURANCES
Registered Hazardous Waste Transporter Database (HWT)	0.25 miles	0
EnviroStor Permitted Facilities Listing (HWP)	1.0 miles	0
Steam-Electric Plant Operation Data (COAL ASH DOE)	Target Property	0
EDR MGP (EDR Proprietary Manufactured Gas Plants)	1.0 miles	0
EDR Exclusive Historic Gas Stations (EDR US Hist Auto)	0.25 miles	1
EDR Exclusive Historic Dry Cleaners (US Hist Cleaners)	0.25 miles	1

Phase I Report

In 2017, Chico Environmental Science & Planning prepared a Phase I Environmental Site Assessment for the project (**Appendix HAZ**). The assessment includes a site reconnaissance, review of readily available regulatory information, and a review of land-use history in order to evaluate environmental conditions at the site, which may have been negatively impacted by the use, storage, and/or disposal of hazardous substances.

The Phase I report environmental considerations are as follows:

- Current site conditions do not present a significant risk to human or environmental health and would not be subject to enforcement action if brought to the attention of a regulatory agency.

This assessment has revealed no evidence of a historical recognized environmental condition, controlled recognized environmental condition or active recognized environmental condition in connection with the property.

Airports

Buchanan Field Airport is approximately 3 miles from the project site and is the closest public or private airport in the vicinity.

Emergency Response

The City of Pleasant Hill's emergency management organization operates under the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). The City Manager directs the emergency management organization, serving as the Director of Emergency Services. The director is responsible for implementing the Emergency

Operations Plan through the efforts of the City's Emergency Operations Center (EOC). Every City department and agency in the city provides support to the operation of the City's EOC, with support from the Contra Costa County Fire Protection District and the Mt. Diablo Unified School District. The City's EOC is organized following the functions and principles of SEMS and NIMS.

In the emergency organization, departments and agencies have specified roles and responsibilities for certain functions. Each functional area with its assigned duties is described in Sections V and VI of the City's Emergency Operations Plan (Pleasant Hill 2009).

Wildland Fire

A review of published Sanborn Fire Insurance Maps was conducted through Environmental Data Resources, Inc. (EDR), however historical map coverage did not extend in the vicinity of the subject site **(Appendix HAZ)**.

REGULATORY FRAMEWORK

City of Pleasant Hill General Plan

The General Plan Safety and Noise Element includes goals and programs to address mitigation and avoidance measures related to structural hazards and public health policy. These policies and programs applicable to the project are as follows:

Hazardous Materials

Safety and Noise Goal 5. Avoid exposure to hazardous substances.

Airports

Safety and Noise Goal 2. Ensure that airport operations do not adversely affect quality of life and safety.

Wildland Fires

Safety and Noise Goal 4. Minimize the threat to people, property and the environment from fire hazards.

DISCUSSION OF IMPACTS

a, b) *No Impact.*

Construction

Both the EPA and the US Department of Transportation (DOT) regulate the transport of hazardous waste and materials, including transport via highways. The EPA administers permitting, tracking, reporting, and operations requirements established by the Resource Conservation and Recovery Act. The DOT regulates the transportation of hazardous materials through implementation of the Hazardous Materials Transportation Act. This act administers requirements for container design and labeling, as well as for driver training. The established regulations are intended to track and manage the safe interstate transportation of hazardous materials and waste. Additionally, state and local agencies

enforce the application of these acts and provide coordination of safety and mitigation responses in the case that accidents involving hazardous materials occur.

Project construction would include refueling and minor maintenance of construction equipment on-site, which could lead to minor fuel and oil spills. The use and handling of hazardous materials during construction would occur in accordance with applicable federal, state, and local laws, including California Occupational Health and Safety Administration (Cal/OSHA) requirements. All construction activities would be subject to the National Pollutant Discharge Elimination System (NPDES) permit process that requires the preparation of a SWPPP, which would be reviewed and approved by the San Francisco Bay RWQCB. Compliance with federal and state regulations for hazardous waste handling and disposal would minimize health risks and adverse environmental consequences from the accidental release of hazardous waste.

Project Operation

Project operation would involve the routine transport, use, or disposal of hazardous materials in very small quantities as they relate to household use. The City of Pleasant Hill regulates household hazard disposal, and each home's occupants would be responsible for proper handling and disposal of household materials. The City currently operates a Household Hazardous Waste Program, where city residents can drop off such waste for free at the Central Contra Costa Sanitary District Household Hazardous Waste facility in Martinez.

Because any hazardous materials used for household operations would be in small quantities and the City has a Household Hazards Waste Program, long-term impacts associated with handling, storing, and dispensing of hazardous materials from project operation would be less than significant.

- c) *No Impact.* The closest school is Christ the King Catholic School, 1,800 feet from the project site, more than one quarter of a mile from the project site.
- d) *Less Than Significant Impact.* The project site is not included on the list of hazardous waste sites (Cortese List) compiled by the EDR Radius Report, pursuant to Government Code Section 65962.5. As such, the project would not create a significant environmental hazard to the environment or to the public. With required compliance with federal, state, and local regulations, these impacts would be reduced to less than significant.
- e) *No Impact.* The project site is more than 2 miles from any public or private airport. The project would have no impact.
- f) *No Impact.* The project site is not located in the vicinity of a private airstrip. The project would have no impact.
- g) *Less Than Significant Impact.* The project would not require any road closures during construction. Pursuant to California Fire Code (CFC) the project would be required to construct roads with appropriate widths for emergency vehicle access. The project applicant would also be required to install a fire hydrant on the project site. All project plans would be submitted for approval to the Contra Costa County Fire Protection District. Therefore, the project would not impair implementation of or physically interfere with an adopted emergency response plan. The impact would be less than significant.

- h) *No Impact.* The project site is not located in an area designated by the California Department of Forestry and Fire Protection (2007) as a VHFHSZ and is in an area identified as having little or no fire threat. The project site is in an urbanized area and would have no impact related to wildfires.

Mitigation Measures

None required.

4.0 ENVIRONMENTAL CHECKLIST

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

SETTING

JES Engineering, Inc., (2018) prepared a detention analysis for the project (**Appendix HYDRO**). The analysis and drainage design recommendations would be consistent with City construction and post-development permitting requirements.

Surface Water Resources and Quality

The primary source of water for Pleasant Hill is the surface water of the Sacramento-San Joaquin Delta, transported via the Contra Costa Canal (built by the US Bureau of Reclamation in the 1940s). The Contra Costa Water District (CCWD) treats this water and provides it directly to the area of Pleasant Hill generally east of Pleasant Hill Road. The East Bay Municipal Utility District (EBMUD) provides water to areas generally east of Pleasant Hill Road. The Martinez Water District also provides water in a small area east of Alhambra Avenue.

The CCWD pumps water from four intakes in the Sacramento-San Joaquin Delta. The intakes are located at Rock Slough, on Old River, on Victoria Canal, and at Mallard Slough. The backbone of the district's water conveyance system is the 48-mile Contra Costa Canal, which starts at Rock Slough and ends at the Martinez Reservoir (CCWD 2017).

Groundwater Resources and Quality

Groundwater resources in the CCWD service area do not supply significant amounts of water to meet or augment untreated water demands. An undetermined number of wells throughout the service area are owned by industries, private individuals, and public municipal water utilities. The CCWD does not manage groundwater and does not have figures as to how much water is pumped from these wells, but it estimates total use within the CCWD service area at approximately 3,000 acre-feet per year.

Drainage and Flooding

The site is currently undeveloped and is a former orchard. It is located near the westerly terminus of McKissick Street on the south side of the road. It is located on 1.19 acres. The tributary drainage area includes 2.12 acres with a maximum flow path of 421 feet and an elevation drop of 16 feet from northwest to southeast. The average slope of the terrain is 3.6%. The site currently drains to Matson Creek (off-site) which runs west to east just south of the subject property.

Federal Emergency Management Agency (FEMA) Flood Map FIRM Panel 06013C0279F eff. 6/16/2009 shows the project site is located in an Area of Minimal Flood Hazard Zone X. The area is determined to be outside the 0.2 percent annual change (or 500-year) floodplain.

REGULATORY FRAMEWORK

City of Pleasant Hill General Plan

The General Plan Safety and Noise Element includes goals and programs to address mitigation and avoidance measures related to flooding and stormwater maintenance. The policies and programs applicable to the project are as follows:

Safety and Noise Goal 1. Minimize potential for serious flooding and drainage problems.

Safety and Noise Program 1.6. Require mitigation for any development that could create or significantly worsen flood or drainage problems.

Safety and Noise Program 1.7. Adopt a no-net-fill policy or limit on impervious surface as a percentage of lot size.

DISCUSSION OF IMPACTS

- a) *Less Than Significant Impact.*

Construction

Runoff from street and other paved areas is a major source of pollution in creeks, San Francisco Bay, and the Pacific Ocean. Construction activities can directly affect the health of our waters unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and creeks. Contractors involved in construction of this project must comply with California Department of Transportation, the Contra Costa County Best Management Practices and California Stormwater Quality Association, Stormwater Best Management Practice Handbook, to prevent erosion, sediment and storm water discharge.

All project grading, construction, and subsequent operations would comply with provisions of the City's NPDES permit requirements mandated by the Clean Water Act. Project construction would require appropriate stormwater runoff and sediment and erosion controls included in the NPDES permit process. Construction projects in Pleasant Hill are required to comply with General Permit and Stormwater Permit standards that address adverse impacts on water quality. Because the project would comply with applicable permitting requirement for project construction, impacts on water quality during construction would be less than significant.

Operation

Project operation could also contribute pollutants, such as oil, grease, and debris, to stormwater drainage flowing over roadways and other impermeable surfaces and entering the city's stormwater system. The project would include a stormwater conveyance and treatment system, designed in accordance with the California Stormwater Best Management Practices Handbook designed in accordance with the California Stormwater Best Management Practices Handbook and C.3 provisions of the NPDES permit. Runoff of each lot and the roadway will be filtered at the source by bio-retention treatment areas. The project would include 1,047 square feet of Low Impact Development (LID) treatment area which is above the City's minimum requirement of 971 square feet.

The project would not conflict with any water quality standards and would have a less than significant impact associated with wastewater or stormwater discharge.

- b) *Less Than Significant Impact.* Residential water service in the project area is supplied by CCWD and would not require groundwater resources that would adversely affect groundwater supplies or recharge. Groundwater quality and infiltration would not be affected by the project, this impact would be less than significant.
- c) *Less Than Significant Impact.* Project construction would involve ground-disturbing activities such as excavation and grading. The project site is sloped in multiple directions and elevations. Most on-site drainage currently flows into Matson Creek through some of the adjacent properties. Clearing and grading would improve and formalize on-site drainage patterns and minimize cross-property flows. Water quality and geological conditions assessments prepared for the project recommend excavation, grading, and fill materials to optimize site conditions for effective stormwater drainage and treatment.

Site preparation activities would improve on-site flows as compared to existing site conditions. NPDES water quality permitting and City Municipal Code regulations require construction projects to submit a stormwater management plan to manage construction and post-construction stormwater runoff, surface drainage, and erosion control. Project Description Construction activities would alter the site's existing drainage pattern; however, these activities would not result in substantial erosion or siltation; therefore, this impact would be less than significant.

- d) *Less Than Significant Impact with Mitigation.* The City's Municipal Code requires that post-development stormwater discharges do not exceed predevelopment conditions. The project proposes adding a total of 22,470 square feet of impervious surface area, which includes driveways, private roads, and house footprints. These features would increase impervious surfaces on the project site, which could increase on- and off-site flows from the property. Pursuant to NPDES C.3 regulations for capturing stormwater runoff, the project would construct LID detention and stormwater treatment facilities. Runoff would be directed to proposed bio-retention basins and other controls to detain and treat flows prior to discharge. To mitigate the potential increase in runoff due to an increase of impervious surface area, the runoff will be detained onsite so that the peak runoff flow will be equal to or less than the peak flow in the undeveloped state. The detention storage will consist of an over-sized storm drain pipe that will serve as both a storm water conveyance system and a storage facility. Because the project would incorporate stormwater management, erosion control measures and storage facility to reduce surface runoff, impacts on planned or existing stormwater drainage systems would be less than significant with mitigation.
- e) *Less Than Significant Impact.* Project stormwater runoff would be collected and conveyed to city storm drains via an on-site drainage system. The project would be required to comply with the development runoff requirements of the City's NPDES permit, including managing any increases in runoff volume and flows. Onsite storm water storage facility will be constructed. Therefore, the project would not increase drainage flows entering the city's drainage system and would not exceed drainage capacity. The project would have a less than significant impact.
- f) *Less Than Significant Impact.* See checklist item a, above.
- g) *No Impact.* The project site is in Zone X, areas determined to be outside the 0.2% annual chance floodplain per Flood Insurance Map, Community Panel Number 06013C0279F, dated June 16, 2009. FEMA describes as an "area of minimal flood hazard, usually depicted on FIRMs [Flood Insurance Rate Maps] as above the 500-year flood level." Because the project site is in Zone X unshaded, the potential for the site to be impacted by flooding is minimal. The project would not place any structures within a 100-year flood hazard area.
- h) *No Impact.* See checklist item g, above. The project would not place any structures within a 100-year flood hazard area.
- i) *No Impact.* Briones Dam in Orinda is approximately 7 miles from the project site. There are no levees in the project vicinity, and the project is not located within a dam inundation area. Therefore, there would be no impact.
- j) *Less Than Significant Impact.* The project is not located in a tsunami inundation or seiche inundation area (ABAG 2015). As discussed in subsection 4.6, Geology and Soils,

engineering techniques would be implemented for hillside stability and erosion control. As such, the site is not subject to mudflow. The project would have less than significant impacts due to tsunami, seiche, or mudflow.

Mitigation Measures

HYD-1 The project is currently undeveloped and is located on 1.19 acres near the westerly terminus of McKissick Street on the south side of the road. The tributary drainage area includes 2.12 acres with a maximum flow path of 421 feet and an elevation drop of 16 feet from northwest to southeast. The average slope of the terrain is 3.6%. The site currently drains to Matson Creek (off-site) which runs west to east just south of the subject property.

The storm water runoff from the proposed development must be equal to or less than the existing runoff. The development will create more impervious area and, as a result, will generate greater runoff from the project site. To mitigate this potential increase in runoff due to development, the runoff will be detained onsite so that the peak runoff flow will be equal to or less than the peak flow in the undeveloped state. The detention storage will consist of an over-sized storm drain pipe that will serve as both a storm water conveyance system and a storage facility.

The Contra Costa County Flood Control and Water Conservation District Hydrology Manual was used to guide the analysis of this project. Both the HEC-HMS model and the HydroCAD Stormwater Modeling software were used to design the project. The storage element utilized is a 24" diameter reinforced concrete pipe (RCP). Storm runoff is routed through this pipe, but the outlet is restricted so it will detain the runoff in order to reduce the discharge rate to at least the pre-development levels. The pipe is approximately 161 feet in length, with a slope of 0.5%. The primary outlet device is a 7'x7' vertical-face orifice that is designed to meter the outflow.

Based on the Hydrology Report by JES Engineering, Inc., the peak discharge of the project for a 6-hour, 25-year storm is 3.2 cfs under the pre-development condition, and 3.4 cfs under the post-development condition without storage. Post development with storage, the peak discharge is 2.4 cfs (under the HEC-HMS Analysis) or 3.1 cfs (under the HydroCAD Analysis). Mitigation measures would reduce this impact to less than significant.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.10 LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The basis for land use and planning in the city is the Pleasant Hill General Plan, adopted in July 2003. The General Plan Community Development Element provides the primary guidance on issues related to land use, land use intensity, and design. In concert with the General Plan, Title 18 of the Pleasant Hill Municipal Code establishes zoning districts in the city and specifies allowable uses and development standards for each district. The City updated its General Plan Housing Element in 2015. The limited supply of land for new housing has driven policies to accommodate more homes at higher densities without changing General Plan land use designations.

Residential development in Pleasant Hill is subject to Architectural Plan reviews to evaluate discretionary projects for consistency with the City’s adopted design guidelines and/or any other applicable site-specific design standards. The guidelines also address and reinforce city and state requirements for sustainable “green” construction practices and the use of BMPs to reduce or prevent off-site site runoff.

REGULATORY FRAMEWORK

City of Pleasant Hill General Plan

The General Plan Community Development Element includes goals and programs that accommodate a variety of residential and commercial land uses that would also apply to the City’s updated Housing Element. Policies and programs applicable to the project are:

Community Development Goal 3: Generate thriving, attractive and cohesive development at vacant or underutilized sites.

Community Development Goal 24. Place utility lines underground.

Community Development Policy 24A. Achieve undergrounding of utilities when and where feasible.

Community Development Program 24.1. Require undergrounding of utilities in conjunction with installation or modification of public and private improvements.

Community Development Goal 3: Community Development Goal 3. Generate thriving, attractive and cohesive development at vacant or underutilized sites.

Housing Policy 2A: Allow a variety of housing types to be built on residential sites.

Housing Policy 5C: Ensure that new residential development is compatible with surrounding neighborhoods

City of Pleasant Hill Housing Element

The goals and policies found in the City's General Plan Community Development Element (2003) and updated Housing Element (2015) policies and programs are designed to take advantage of development options to increase the City's housing stock while preserving existing housing. The policies and programs applicable to the project are:

Housing Policy 2A: Allow a variety of housing types to be built on residential sites.

DISCUSSION OF IMPACTS

- a) *No Impact.* The project proposes to establish a residential community as an infill development. The proposed project would not disrupt or divide the physical arrangement of the community, or conflict with any applicable land use policy, or be incompatible with the existing land uses in the project vicinity. Major roadway connections to and from the property include Interstate 680, State Route 24, and State Route 4. The Pleasant Hill BART station is approximately 1.5 miles from the project site. The project would not physically divide an established community by building or removing major roadway connections and would have no impact.
- b) *Less Than Significant Impact.* The property is designated R-10 (single-family, medium density). This designation allows detached houses designated R-10 (single-family, medium density) and is zoned for 10,000-square-foot lots at 3.1 to 4.5 units per net acre. The project site is approximately 1.19 acres and the project would have lots ranging in size from 10,549 to 12,262 (net) square feet. Additional project components are detailed in Section 3.0, Project Description. The approval process requires the developer to submit a Vesting Tentative Map, and an Architectural Review Permit prior to subdivision of the land, and prior to construction of the residences. Public service demands would not exceed the capacity of existing and planned systems.

The project would not conflict the City's General Plan or with a program or ordinance established to avoid or mitigate an environmental effect. The project would contribute to the city's character as a residential community and would support the goals and needs for increased available housing. Impacts would be less than significant.

- c) *Less Than Significant Impact.* The project would comply with the City's zoning ordinance requiring undergrounding of utilities. As discussed in subsection 4.4, Biological Resources, the project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Thus, the project would have a less than significant impact.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.11 MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

According to the US Geological Survey mineral resources data for Contra Costa County, Pleasant Hill does not contain any mineral resources. Further, there are no regulated mine facilities and no known mineral resources within the city limits (USGS 2017).

DISCUSSION OF IMPACTS

- 1) *No Impact.* The project would not involve the loss of an available known mineral resource that would be of value to the region and would have no impact.
- 2) *No Impact.* There are no locally important mineral resources are within or adjacent to the project site. The project would have no impact.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.12 NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, exposure of people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

The project site is located directly south of 60 and 98 McKissick Street. The project site consists of two undeveloped parcels that currently do not have street addresses. Land uses in the project area primarily comprise single-family residences.

Noise-Sensitive Receptors

Noise-sensitive land uses are those that may be subject to stress and/or interference from excessive noise. Noise-sensitive land uses include schools, hospitals, and institutional uses such as churches and museums. Typically, residential uses are also considered noise-sensitive receptors. Industrial and commercial land uses are generally not considered sensitive to noise. As a proposed single-family housing development, the project itself is considered a future sensitive receptor. The closest existing sensitive receptors to the project site are 13 single-family residences adjacent to the project site on McKissick Street, Hubbard Avenue, Oakvue Road, and Oakvue Court. The closest school to the project site is Pleasant Hill Middle School, approximately 1,320 feet to the southeast.

REGULATORY FRAMEWORK

City of Pleasant Hill General Plan

The General Plan Safety and Noise Element includes goals and programs to address community noise in Pleasant Hill. The policies and programs applicable to the project are:

Safety and Noise Policy 7A. Require new development projects to be designed and constructed to meet acceptable noise level standards adopted by the City.

Safety and Noise Policy 7B. Evaluate the noise impacts of development based on the potential for significant increases in noise levels, in addition to acceptability standards.

Safety and Noise Program 7.2. Use the City noise contour map to determine when acoustical studies shall be required.

City of Pleasant Hill Municipal Code

The City's Municipal Code establishes limitations on the hours of construction noise and sets noise performance standards by land use type.

Section 9.15.040, Special noise sources.

L. Construction of buildings and projects.

- 1. It is unlawful for a person within a residential land use district to operate or perform construction or repair work on a building, structure or project, or to operate a pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist, or other construction-type device on city-recognized holidays as designated by city council resolution, and on Monday through Friday, prior to 7:30 a.m. and after 7:00 p.m. on each day and on Saturdays and Sundays, prior to 9:00 a.m. and after 6:00 p.m. The above prohibition does not apply to emergency work.*
- 2. Exemptions by special permit from the above prohibitions may be obtained from the city manager if the one applying for the exemption can demonstrate written consent from abutting residents and that the noise and disruption would not cause a reasonable person of normal sensitivity residing in the area major discomfort or annoyance.*

Section 8.50.060, Performance standards.

The following performance standards shall apply to all use classifications in all zoning districts:

- A. Noise. All uses and activities shall comply with the Pleasant Hill noise regulations (PHMC Chapter 9.15), and no use shall create ambient noise levels measured at the property line which exceed the standards in Schedule 18.50.060 [included in this IS/MND as **Table 4.12-1** Where noise is measured at the property line of abutting districts, the noise standard for the more restrictive district applies.*

**TABLE 4.12-1
SCHEDULE 18.50.060 – MAXIMUM NOISE STANDARDS BY ZONING DISTRICT**

Zone of Property Receiving Noise		Maximum Noise Level Ldn or CNEL, dB
R, NB	Residential and Neighborhood Business Districts	50
RB, C	Commercial and Retail Business Districts	60
PAO	Office District	65
LI	Industrial District	70
PUD, PPD	Planned Development/Precise Plan District	Study Required

1. *Duration and timing. The noise standards above shall be modified as follows to account for the effects of time and duration on the impact of noise levels:*
 - a. *In residential zones, the noise standard shall be five dB lower between 10:00 p.m. and 7:00 a.m.*
 - b. *Noise that is produced for no more than a cumulative period of five minutes in any hour may exceed the standards above by five dB.*
 - c. *Noise that is produced for no more than a cumulative period of one minute in any hour may exceed the standards above by 10 dB.*
2. *Zoning administrator may require acoustic study. The zoning administrator may require an acoustic study for any proposed project, which could have or create a noise exposure greater than that deemed acceptable. For any study required, noise shall be measured with a sound level meter, which meets the standards of the American National Standards Institute (ANSI Section S1.4-1979, Type 1 or Type 2). Noise levels shall be measured in decibels from the property line. The unit of measure shall be designated as dB. A calibration check shall be made of the instrument at the time any noise measurement is made.*
3. *Noise attenuation measures. The zoning administrator may require the incorporation into a project of any noise attenuation measures deemed necessary to ensure that noise standards are not exceeded.*

Criteria for Acceptable Noise Exposure

The City's General Plan Safety and Noise Element outlines criteria and guiding policies for establishing acceptable noise levels (Pleasant Hill 2003). Table SN3 in the element shows acceptable noise levels for specific land uses established by the California Governor's Office of Planning and Research, including normally acceptable noise limits ranging from 60 to 65 decibels in residential areas. However, Municipal Code Section 18.50.060 establishes lower acceptable levels, including a 50-decibel maximum for residential areas. The project site would be developed with residences and is adjacent to other residential land uses.

The analysis also accounts for the increases in noise levels over the existing noise conditions. A 3-dB increase is the minimum audible difference perceptible to the average person. An increase of more than 3 dBA, where the existing noise levels already exceeds applicable noise standards, would be a significant impact.

DISCUSSION OF IMPACTS

- a, b,
c, d) *Less Than Significant Impact.*

Short-Term Construction Noise

Project construction would temporarily increase noise levels in the project vicinity. Site preparation activities, which include excavation and grading, tend to generate the highest noise levels because earthmoving equipment is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, front loaders, scraper, graders, and compacting equipment. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Maximum noise levels for typical residential development construction equipment range from 80 to 90 dB measure at 50 feet (FTA 2006).

During project construction, noise levels could affect the nearest existing sensitive receptors in the project vicinity, 13 single-family homes on McKissick Street, Hubbard Avenue, Oakvue Road and Oakvue Court. However, this impact would be temporary, and equipment noise would cease completely when construction is complete. Furthermore, per Municipal Code Section 9.15.040, construction noise is considered a "special noise source." Section 9.15.040 expressly prohibits construction work Monday through Friday prior to 7:30 a.m. and after 7:00 p.m. Project construction would be prohibited on weekends and City-recognized holidays. Exemptions are issued by a special permit as specified in Section 9.15.040.

Compliance with existing regulations would minimize disturbance to sensitive receptors in the project vicinity. Project construction noise would have a less than significant impact.

Impacts on Future Project Residents

The effect of existing noise on future residents of the project is considered an effect of the environment on the project and, as such, is not a CEQA consideration. However, it is a planning consideration for the City in determining project design and permit approvals. General Plan Safety and Noise Policy 7A requires new development projects to be designed and constructed to meet the City's acceptable noise level standards.

Per Municipal Code Section 8.50.060, the zoning administrator may require an acoustic study for any proposed project that could have or create a noise exposure greater than that deemed acceptable. An acoustical study (or other demonstration) may be required to verify that project design characteristics (e.g., wall and window sound rating) attenuate noise to acceptable levels.

The project would not generate noise in excess of standards or result in a substantial permanent, temporary, or intermittent increase in ambient noise levels in the project vicinity. Impacts would be less than significant.

Construction activities would require the use of off-road equipment such as bulldozers, excavators, graders, pavers, and haul trucks. The use of major groundborne vibration-generating construction equipment, such as pile drivers, would not be needed for the project. Nonetheless, during grading and construction, the project may generate

groundborne vibration as a result of heavy equipment operations. However, this impact would be temporary, and vibration would cease completely when construction ends. As previously described, Municipal Code Section 9.15.040 expressly prohibits construction work Monday through Friday prior to 7:30 a.m. and after 7:00 p.m. As stated above, construction work would be prohibited on weekends and holidays.

High levels of groundborne vibration can cause architectural or structural damage to nearby buildings. The threshold at which there is a risk of architectural damage to normal dwelling structures (i.e., cracks in plastered walls and ceilings) is a peak particle velocity of 0.2 inches per seconds (Caltrans 2002). **Table 4.12-2** shows vibration levels for typical construction equipment, based on the application of the Caltrans-recommended standard.

**TABLE 4.12-2
TYPICAL CONSTRUCTION EQUIPMENT VIBRATION LEVELS**

Equipment	Peak Particle Velocity at 25 Feet (inches per second)
Large Bulldozer	0.089
Loaded Truck	0.076
Jackhammer	0.035
Small Bulldozer/Tractor	0.003

Source: FTA 2006; Caltrans 2004

Based on the vibration levels presented in **Table 4.12-2**, ground vibration generated by heavy-duty equipment would not be anticipated to exceed 0.09 inches per second peak particle velocity at 25 feet. No heavy construction equipment would be used within 25 feet of existing structures. The use of construction equipment would not result in a groundborne vibration velocity level above 0.2 inches per second, and predicted vibration levels at the nearest existing structures would not exceed recommended criteria.

Therefore, the project would not expose persons to or result in generation of excessive groundborne vibrations, and the impact would be less than significant.

- e) *No Impact.* The closest airport to the project is Buchanan Field, approximately 3 miles to the northeast. Per the Contra Costa County Airport Land Use Compatibility Plan, the project site is not located in the airport influence area, defined as 14,000 feet (2.65 miles) from the end of primary active runways (Contra Costa County Airport Land Use Commission 2000). The project would have no impact.
- f) *No Impact.* There are no private airstrips within 10 miles of the project site. The project would have no impact.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.13 POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

According to the Association of Bay Area Governments (ABAG), Pleasant Hill's population was 34,127 in 2013. The City's General Plan Housing Element, adopted in April 2015, projected a population of 34,400 in 2015 and 35,900 by 2020. The City anticipates a 1.65 percent increase in the number of households (those people living in single-family housing, condominiums, apartments, mobile homes, or other housing units) from 13,708 in 2010 to 14,160 in 2020. Two-person households are the most common in Pleasant Hill at 34 percent, with single-person households second. In 2010, 6 percent of all households had more than four persons.

The State of California has adopted a process for determining each local jurisdiction's fair share of regional housing needs. The process begins with the California Department of Housing and Community Development (HCD) meeting with each regional council of governments to determine the need for new housing in that region. The regional council of governments is then required to determine what share of the regional housing need should be assigned to each city and county. The requirements for each jurisdiction include a share of housing needs for all income levels.

ABAG and HCD determined that the nine-county Bay Area has a need to add 187,990 new housing units for the period from January 1, 2014, to October 31, 2022. ABAG allocated shares of this need to cities by calculating each city's share of the projected increase in the number of jobs and households during that period. For all jurisdictions in Contra Costa County, the County was assigned 100 percent of the Regional needs for the spheres of influence. Pleasant Hill's fair-share housing needs would include adding 448 new units between 2014 and 2022.

DISCUSSION OF IMPACTS

a, b, c) *No Impact.* The City's General Plan anticipates that the city's population would increase by 1,500 between 2015 and 2020. Assuming the average household would include four occupants, the project would add approximately 16 residents which is 0.01 percent of anticipated population growth. The project would minimally increase the city's existing housing stock. Because the increase in population associated with the project is minimal, the project would not induce substantial population growth in Pleasant Hill.

The project site is currently undeveloped. As described in subsection 4.10, Land Use and Planning. The City considers development on opportunity sites as crucial to meeting the state's fair-share affordable housing goals. The project would provide more homeownership opportunities in Pleasant Hill. The project would not demolish occupied housing units that would require building replacement units.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.14 PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

Fire Protection

The Contra Costa County Fire Protection District provides fire protection services to the City of Pleasant Hill. The district maintains its headquarters and communications center at 2010 Geary Road in Pleasant Hill. It also operates two fire stations in the city: Station 2 is adjacent to headquarters and Station 5 is at 205 Boyd Road. The nearest fire station is Station 5 at 205 Boyd Road, approximately 0.6 mile east of the project site.

Police Protection

Police protection services are provided by the Pleasant Hill Police Department, which is located at 330 Civic Drive, approximately 1.4 miles north of the project site. The department consists of four departments: administrative, investigations, patrol, and support services. The Pleasant Hill Police Department employs 40 officers, 20 civilian employees, and 12 volunteer reserve officers (Pleasant Hill 2003).

Schools

Pleasant Hill is within the service boundaries of the Mt. Diablo Unified School District. The school district operates a variety of schools in Contra Costa County. The district assigns students to neighborhood elementary, middle, and high schools based on street address. The nearest public schools are Sequoia Elementary and Middle Schools, Pleasant Hill Middle School, and College Park High School (Mt. Diablo Unified School District 2017).

Parks

The Pleasant Hill Recreation and Park District (District) maintains 203.5 acres of parkland and open space in the city (with 68.0 developed acres). The closest parks to the project site are Rogers-Smith Park, 0.7 mile to the northwest, and Pleasant Hill Park, 0.6 miles to the northeast. In addition to parkland, city residents have access to recreational facilities at public schools, which account for another 57.4 acres, with landscaping, playing fields, lights, and/or buildings. Private open space and other common areas include another 130 acres.

DISCUSSION OF IMPACTS

Less Than Significant Impact. Adequate police and fire services currently serve the project area. The minimal population increase associated with the project would not affect the provision of fire protection, police services, parks, or other public facilities, and no new or expanded facilities would be required. Pleasant Hill Municipal Code Section 17.40.020.J would require the applicant to pay a park dedication fee to offset potential impacts on open space ratios required by the City.

Further, in accordance with Senate Bill 50, the project applicant would be required to pay school impact fees to help fund the construction of new school facilities. The payment of these fees would fully mitigate the project's potential impact on schools.

Impacts would be less than significant.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.15 RECREATION.				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SETTING

The City's recreation and open space facilities are run by the Pleasant Hill Recreation and Park District (District), which provides recreation programs for all ages, special events, open space preservation, landscape, and facility maintenance. The District serves the City of Pleasant Hill and the surrounding unincorporated areas. The District oversees eight parks, four rental facilities, one aquatic complex, and 145 acres of open space (Pleasant Hill Recreation and Park District 2017). The City has an adopted standard of 3 acres of developed parkland per 1,000 residents. The Pleasant Hill Recreation and Park District maintains parkland and open space in the city, including the portion of the Contra Costa Canal Trail that runs through Pleasant Hill. The Recreation and Park District is independent of City government. The district was established in 1951 and encompasses about 20 percent more households than does the city (Pleasant Hill 2003).

DISCUSSION OF IMPACTS

a, b) *Less than Significant Impact.* The project would not include additional public open space; however, Pleasant Hill Municipal Code Section 17.40.020.J would require the applicant to pay a park dedication fee to offset potential impacts on open space ratios required by the City. Therefore, the use of existing parks and other recreational facilities would not substantially increase, and no new or expanded facilities would be required. The project would have a less than significant impact.

Mitigation Measures

None required.

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

SETTING

The project site could be accessed by two collector streets; Boyd Road (approximately 700 feet to the north) and Patterson Boulevard (approximately 1,800 feet to the east) from McKissick Street via a private drive that would serve all four lots.

Analysis Methodology

To determine the trips forecast for the project, trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual were utilized. **Table 4.16-1** summarizes trip generation rates in and out of the project site during the AM and PM peak-hour conditions. **Figure 4.16-1** shows existing turning movement volumes, lane geometry, and traffic controls at the study intersections.

The trip generation rates for a single-family dwelling unit have the highest trip generation rate for any residential dwelling unit category. This higher trip rate accounts for larger homes that could have as many as four or five bedrooms and have multiple residents that are of legal driving age.

**TABLE 4.16-1
TRIP GENERATION CALCULATIONS**

Land Use	Intensity	Daily Trips	Trip Generation					
			AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
ITE Trip Rate (Land Use Code 210)								
Single-Family Detached		9.52 per DU	25%	75%	0.75 / DU	63%	37%	1.00 DU
Trip Generation								
Single-Family Detached	4 DU	39	1	2	3	3	1	4

Sources: Transportation Engineers (ITE) Trip Generation Manual, 10th Edition

Trip distribution assumptions are based on the existing traffic distribution in the area as determined from the latest traffic counts. The distribution also takes into consideration the project's proximity to freeway interchanges, the existing directional split of local residential areas, and the overall land use patterns in the area. The resulting distribution indicated that approximately 40 percent of the traffic would use Boyd Road to and from the east, 20 percent would use Boyd Road to and from the west, and the remaining 40 percent would use Patterson Boulevard to and from the south.

DISCUSSION OF IMPACTS

- a, b) *Less Than Significant Impact.* The project would generate approximately 39 daily trips with 3 AM and 4 PM peak hour trips (see **Table 4.16-1**). The project-generated AM and PM peak-hour traffic volumes are minor and therefore are not anticipated to result in operational issues.

Because project operation would not adversely affect LOS levels, these impacts would be less than significant.

- c) *No Impact.* The closest public airport to the project site is Buchanan Field Airport is a county owned and operated airport in unincorporated Contra Costa County. The airport is approximately 3 miles northeast of the project site (Pleasant Hill 2003). There would be no changes air traffic patterns, nor would the project result in a change in location that results in substantial safety risks. Therefore, the project would have no impact.
- d) *No Impact.* Project access would be via an existing private driveway from McKissick Street. Project site circulation would not cause any safety or operational problems. The project site design would conform to City design standards, and the project would not create any significant impacts on pedestrians, bicyclists, or traffic operations. No internal site circulation or access issues were identified that would cause a traffic safety problem or any unusual traffic congestion or delay. The project would not increase safety hazards by introducing new design features or compatible uses. Therefore, the project would have no impact.
- e) *No Impact.* Sufficient emergency access is determined by factors such as the number of access points, roadway width, and proximity to fire stations. Land use for the project would include a primary entrance on McKissick Street which would be built to comply with the City Municipal Code. Proposed access road within the project site would be wide enough to accommodate emergency vehicles. Further, the project would be subject to approval from the Contra Costa County Fire Protection District. The project would not result in inadequate emergency access. Therefore, the project would have no impact.
- f) *No Impact.* The project would generate additional pedestrian and bicycle traffic in the project vicinity, but it would not significantly impact or change the design of any existing pedestrian crossings. As such, the project would not create new safety problems in the project area, nor would it create deficiencies in alternative travel.

In addition, the project would not conflict with any adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The project would not interfere with any existing bus routes, would not remove or relocate any existing bus stops, and would not conflict with any transit plans or goals of the City of Pleasant Hill or the Contra Costa Transportation Authority (CCTA). Therefore, the project would have no impact.

Mitigation Measures

None required.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.17 TRIBAL CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, features, 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) A 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SETTING

Native American Consultation

On November 6, 2018, the California Native American Heritage Commission (NAHC) in Sacramento was contacted to determine whether it had any information about archaeological sites or traditional cultural properties of concern to Native Americans in its Sacred Lands File for the project area. The NAHC replied on November 19, 2018, stating that no such properties were listed in the Sacred Lands File.

On February 11, 2019, the City sent written requests to the Lone Band of Miwok Indians, the Torres Martinez Desert Cahuilla Indians, Wilton Rancheria, and Indian Canyon Mutsun Band of Costanoan in accordance with Assembly Bill 52 and Public Resources Code section 21080.3.1 (b). The letters requested a determination if there was available information concerning tribal cultural resources present on the project site. On March 6, 2019, the Wilton Rancheria responded to the request; on March 7, 2019, the City provide the requested information. On March 22, 2019, The Wilton Rancheria confirmed that no additional information is required for their review.

DISCUSSION OF IMPACTS

a)

- i) *No impact.* As discussed in subsection 4.5 Cultural Resources, there would be no substantial change in the significance of a historic resource due to project implementation. There would be no impact on historic resources.
- ii) *No Impact.* As detailed above, Native American tribes were consulted about the project to determine whether historic resources exist on the project site. No tribes requested to consult on this project and the City is not aware of any significant tribal cultural resources on the site. Therefore, there would be no impact.

Mitigation Measures

None required.

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

SETTING

Water

Water is provided by Contra Costa Water District (CCWD) for this project. Its water source is mainly the Sacramento-San Joaquin Delta. The CCWD operates and maintains a complex system of water transmission, treatment, and storage facilities to supply both treated and untreated water to approximately 500,000 residential and large industrial customers throughout north, central, and east Contra Costa County.

Water demand projections for single-family residences in the CCWD service area are shown in **Table 4.18-1**. Projections are calculated in 5-year increments and include locally supplied water. Conservation and recycling measures are not factored into projected demand levels.

**TABLE 4.18-1
FUTURE WATER DEMAND**

	2010	2015	2020	2025	2030	2035	2040
Single-Family Residences	25,790	26,580	26,760	27,310	27,930	28,630	29,330

Source: Contra Costa Water District Urban Water Management Plan, 2016

Wastewater

Wastewater generated in Pleasant Hill is collected and disposed by the Central Contra Costa Sanitary District (CCCSD). The treatment plant treats an average of approximately 36 million gallons of wastewater per day generated in a 146-squaremile area with approximately 450,000 residents and more than 3,000 businesses. The facility, located in Martinez, has a permitted treatment capacity of 55 million gallons per day (MGD) and 240 mgd during the wet weather season.

Solid Waste

Allied Waste, a private company, is contracted to pick up solid waste, recyclable materials, and green waste in the city and its environs. The sole repository of solid waste from Pleasant Hill is Keller Canyon Landfill. The landfill totals 2,600 acres, 244 acres of which are permitted for disposal of municipal waste. The landfill accepts 2,500 tons per day (tpd), 71 percent of its permitted amount of 3,500 tpd. The landfill is currently 7 percent full and will accommodate current disposal capacity levels for approximately 50 years. The city generates an estimated 8,572 tons of solid waste per year (24 tpd). Single-family households in Pleasant Hill generate an estimated 6,300 tons of solid waste per year, or 4.5 pounds per day¹ (CalRecycle 2018).

The Keller Canyon Landfill is currently proposing to modify its existing conditions of approval to increase the current maximum daily tonnage limit for disposal from 3,500 to 4,900 tons per day. (CalRecycle 2015). The landfill proposes that the conditions of approval be revised to identify a separate maximum daily tonnage limit on organic material accepted for use as alternative daily cover and inert material accepted for beneficial reuse on-site. The landfill also proposes that approximately 1,300 tpd of non-landfilled materials be specifically excluded from the daily disposal tonnage limitation. The following daily tonnage limits for non-landfilled materials are also being proposed as part of this application: green waste: 500 tpd; wood waste: 300 tpd; and inert material: 500 tpd (includes concrete, asphalt base material).

DISCUSSION OF IMPACTS

- a, e) *Less Than Significant Impact.* Wastewater generated by the project would be conveyed to the CCCSD's wastewater treatment plant. The plant currently meets all applicable San Francisco Bay RWQCB water quality standards and waste discharge requirements. Therefore, the project would not exceed any wastewater discharge requirements. The CCCSD projects a population of 377,355 within its service boundaries by 2035. CCCSD facilities would have adequate capacity to accommodate anticipated growth projected in Pleasant Hill (CCCSD 2017). The project would result in a negligible increase in wastewater, and no new or expanded treatment facilities would be required as the

¹ Calculation: 24 tons (48,000 lbs) /10,714 single family households = 4.5 pounds.

result of project implementation. Projected wastewater flows from the project's 4 residential structures and associated landscaping would not exceed the district's capacity to provide wastewater treatment services. Therefore, the project would have a less than significant impact on wastewater facilities.

- b, d) *Less Than Significant Impact.* The project is located entirely within the service boundary of the CCWD and the District will provide treated (potable) water services to the project (per CCWD Code of Regulations Section 5). The project will install a new 6-inch mainline extension from McKissick Street and a new fire hydrant. Approved automatic fire sprinkler system will be installed in the new residential structures per the California Residential Code. Appropriate backflow prevention will also be installed for all residential water service to protect water quality. Irrigation and landscaping will comply with the District's common sense water-use prohibitions. Because the project would not cause significant environmental effects that would require construction or expansion of existing waste or wastewater treatment facilities, impacts would be less than significant.
- c) *Less Than Significant Impact with Mitigation.* The City's Municipal Code requires that post-development stormwater discharges do not exceed predevelopment conditions. The project will add a total of 22,470 square feet of impervious surface area, which includes driveways, private roads, and house footprints. These features would increase impervious surfaces on the project site, which could increase on- and off-site flows from the property. Pursuant to NPDES C.3 regulations for capturing stormwater runoff, the project would construct LID detention and stormwater treatment facilities. Runoff would be directed to proposed bioretention basins and other controls to detain and treat flows prior to discharge. To mitigate the potential increase in runoff due to an increase of impervious surface area, the runoff will be detained onsite so that the peak runoff flow will be equal to or less than the peak flow in the undeveloped state. The detention storage will consist of an over-sized storm drain pipe that will serve as both a stormwater conveyance system and a storage facility. Because the project would incorporate stormwater management, erosion control measures and storage facility to reduce surface runoff, impacts on planned or existing stormwater drainage systems would be less than significant.
- f) *Less Than Significant Impact.* The solid waste generated by the project would be accommodated by the Keller Canyon Landfill. Since the project would be served by landfills with sufficient capacity to accommodate waste generation and disposal, this impact would be less than significant.

**TABLE 4.18-2
SOLID WASTE GENERATION**

Type of Use	Size	Generation Factor	Amount (lbs/day)
Proposed Use			
Residential	4 DU	4.5 lbs/DU/day	18

Source: CalRecycle 2017

Note: DU = dwelling unit

- g) *Less Than Significant Impact.* California Assembly Bill 939, also known as the Integrated Waste Management Act, was passed in 1989 to address the increases in the state's waste stream and decreases in landfill capacity. During project construction, waste

material would be hauled off-site. State and city regulations require construction and demolition projects to divert 50 percent of discarded materials from landfills. Prior to obtaining a building permit, the project applicant would submit a waste management plan to the City with performance standards for meeting waste diversion requirements. Reusing and recycling construction debris would further the City's efforts to reduce waste and comply with AB 939 goals to reduce disposal rate thresholds for city residents. Because the project would comply with all applicable federal, state, and local regulations for waste disposal, this impact would be less than significant.

Mitigation Measures

UTI-1 The project is currently undeveloped and is located on 1.19 acres near the westerly terminus of McKissick Street on the south side of the road. The tributary drainage area includes 2.12 acres with a maximum flow path of 421 feet and an elevation drop of 16 feet from the northwest to southeast. The average slope of the terrain is 3.6%. The site drains to Matson Creek which runs west to east just south of the subject property.

The storm water runoff from the proposed development must be equal to or less than the existing runoff. The development will create more impervious area and, as a result, will generate greater runoff from the project site. To mitigate this potential increase in runoff due to development, the runoff will be detained onsite so that the peak runoff flow will be equal to or less than the peak flow in the undeveloped state. The detention storage will consist of an over-sized storm drain pipe that will serve as both a storm water conveyance system and a storage facility.

The Contra Costa County Flood Control District and Water Conservation District Hydrology Manual was used to guide the analysis of this project. Both the HED-HMS model and the HydroCAD Stormwater Modeling software were used to design the project. The storage element utilized is a 24" diameter reinforced concrete pipe (RCP). Storm runoff is routed through this pipe, but the outlet is restricted so it will detain the runoff in order to reduce the discharge rate to at least the pre-development levels. The pipe is approximately 161 feet in length, with a slope of 0.5%. The primary outlet device is a 7" x 7" vertical-face orifice that is designed to meter the outflow.

Based on the Hydrology Report by JES Engineering, Inc., the peak discharge of the project for a 6-hour, 25-year storm is 3.2 cfs under the pre-development condition, and 3.4 cfs under the post-development condition without storage. Post development with storage, the peak discharge is 2.4 cfs (under the HEC-HMS Analysis) or 31 cfs (under the HydroCAD Analysis). Mitigation measures would reduce this impact to less than significant.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
4.19 MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

DISCUSSION OF IMPACTS

- a) *Less Than Significant Impact with Mitigation.* None of the potential impacts identified for the project have the potential to degrade habitat or wetlands. Mitigation Measure **AQ-1** would reduce impacts of air quality during construction activities. Mitigation measures **BIO-1** through **BIO-6** would reduce impacts on migratory and nesting birds/owls/bats, as well as on Sacramento splittail, discovered during project construction and tree removal impacts. Compliance with mitigation measures **CUL-1** and **CUL-2** would reduce potential impacts on archaeological and historic resources to less than significant levels. Mitigation Measure **GEO-1** would reduce impacts of expansive soil to ensure that surface waters are directed away from the houses and other structures by adopting the Building Code grades as a minimum. Mitigation **HYD-1** would reduce impacts on stormwater runoff with the incorporation of stormwater management, erosion control, and storage facilities. Mitigation **UTI-1** would reduce the impacts on the environment from the proposed new stormwater drainage facilities.

- b) *Less Than Significant Impact.* The project would not result in any long-term impact that would permanently or adversely alter GHG emissions. Therefore, the potential for cumulative effects from the project, in combination with other planned or anticipated projects, is low. In general, an individual project's GHG emissions do not have a large impact on climate change. However, once added with all other GHG emissions in the past and present, they combine to create a perceptible change to climate. Because of the extended length of time that GHGs remain in the atmosphere, any amount of GHG emissions can be reasonably expected to contribute to future changes in climate and weather conditions. The amount of CO₂ emissions from the project, although measurable, would be minor. Therefore, the project's contribution to GHG emissions would not be cumulatively considerable, and the project would have a less than significant impact.

- c) *Less Than Significant Impact.* As described throughout this IS/MND, the project would not result in substantial environmental effects on human beings, either during construction or during long-term occupancy of the residences. Mitigation measures are identified in this IS/MND to reduce the severity of potentially significant impacts related to air quality, biological resources, cultural resources, geology and soils, and hazardous materials. Implementation of these mitigation measures would ensure that the project would not result in impacts that would cause substantial adverse effects on human beings, either directly or indirectly.

5.0 REFERENCES

Chico Environmental. 2017. Phase 1 Environmental Site Assessment ASTM 1527-13, McKissick Street Property, APN': 149-061-026 & 149-061-033, Pleasant Hill, CA 94523

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Live Oak Associates, Inc. 2018. Biological Evaluation, McKissick Property, City of Pleasant Hill, Contra Costa County, California

Native-X, Inc. 2018. Cultural Resource Survey Four-Lot Subdivision on McKissick Street, Pleasant Hill, CA

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