



INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

FINAL

FOR THE

VINE HILL RESIDENTIAL PROJECT

April 2018

Prepared for:

City of Martinez – City Hall
525 Henrietta Street
Martinez, CA 94553
925-372-3500

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762

D e N o v o P l a n n i n g G r o u p

A Land Use Planning, Design, and Environmental Firm



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INITIAL STUDY CHECKLIST

PROJECT TITLE

Vine Hill Residential Project

LEAD AGENCY NAME AND ADDRESS

City of Martinez
525 Henrietta Street
Martinez, CA 94553

CONTACT PERSON AND PHONE NUMBER

Christina Ratcliffe, Economic and Community Development Director
(cratcliffe@cityofmartinez.org)

PROJECT SPONSOR'S NAME AND ADDRESS

Trent Sanson
DeNova Homes
1500 Willow Pass Court
Concord, California 94520

PROJECT LOCATION AND SETTING

The project site, which consists of a former golf course and pro shop, and a currently operating restaurant and bar, and vehicle storage is located at 451 Vine Hill Way on the southwest corner of the intersection between Vine Hill Way and Rolling Hill Way in a residential area of Martinez, California (Figures 1 and 2). The project site is located approximately one-half mile south of Highway 4. The project site totals approximately 26.77 acres. Elevations on site range from 310 feet on the hill on the southeast side of the project site, to 160 feet in the northwestern edge of the project site.

The project site is currently occupied by the former Pine Meadow Golf Course, which was developed in 1970. On-site operations included golfing, golf course maintenance, retail, and food service activities. Golf course and associated operations ceased as of April 12, 2015; however, the restaurant, bar, and vehicle storage operations and site maintenance have continued. In addition to the single-story club house and tavern building, the project site is improved with several storage units and maintenance sheds, a formerly used irrigation basin which is now dry, asphalt-paved parking areas and associated landscaping. There is a single paved road providing access to the clubhouse and two parking lots, one paved, and one unpaved with gravel. A landscaping yard which contains piles of sand, soil and rock that were associated with the former golf course maintenance is located south of the clubhouse. The yard continues to have piles of sand, soil, and rock, and also serves as storage of some vehicles and RVs. The Assessor's Parcel Number (APN) for the subject property is 162-020-0019. The project site currently has natural gas and electricity provided by Pacific Gas and Electric (PG&E), municipal potable water provided by the City of Martinez, and sewage disposal services provided by Mt. View Sanitary District (MVSD).

Surrounding land use is single-family residential. An unnamed tributary to Grayson Creek is located off site, approximately 250 feet to the south. Briones Regional Open Space is located approximately two miles southwest of the site. While in use as a golf course, vegetation on the project site was maintained in a parklike appearance conducive to its former use, but since closure of the golf

course the property is now mowed or grazed only for fire suppression and has converted to an annual grassland over the past few years.

GENERAL PLAN AND ZONING

The project site is designated for residential uses by the General Plan and is zoned R-1-7500 (R-7.5). The City Council considered the General Plan designation and zoning of the project site on January 18, 2017 as part of the consideration of the Planning Director's determination regarding application completeness for the Project and passed Resolution 011-17, which found that substantial evidence was presented establishing that the project site has a residential General Plan land use designation with zoning of R-1-7500 (currently referred to as R-7.5) and further found that a General Plan and Zoning amendment are not required in order to consider a subdivision of the project site for residential uses consistent with R-7.5. Resolution 011-17 included the following findings in support of this determination:

"A. Findings of Fact Regarding the Land Use History of the Subject Property"

1) *Annexation and the Designation of the Property as contained within the "Holding" Zoning District.*

The Pine Meadow Golf Course was privately build as a public golf course in the 1960's. The property was annexed into the City of Martinez in 1970 with properties owned by the Coward and Valerga families. City records indicate that upon annexation, the property was placed in a "holding" zoning district, pending future land use actions. This was the practice of the City at that time. The "holding" zoning district was a place holder pending actions to adopt both General Plan land use designations and zoning for parcels coming into the City.

General Plans were not mandatory in California until 1971 (1971 Cal. Stat. ch 1446.) and zoning was not required to be in conformance with a General Plan at the time that the Subject Property was annexed into the City.

2) *The Hidden Lakes Open Space Committee Action.*

Following the Coward/Valerga annexation, a committee of citizens and officials, comprising the Hidden Lakes Open Space Committee, met during 1971 to develop a specific area plan for the Hidden Lakes area and consider an appropriate mix of uses in the area, including open space. This area included lands that were annexed between 1955 and 1970. The final report of the committee was presented to the City Council which accepted the report and the City Council appears to have considered the final report in taking subsequent general plan and zoning actions relating to the area.

3) *The 1972 Failed Seeno Subdivision.*

A subdivision development plan was submitted in March of 1972 by Seeno Construction on behalf of the property owners, James and Julie Coward, for consideration by the Planning Commission. That proposal included a Tentative Map for 85 single family lots on the 21-acre site adjoining the golf course. The application requested rezoning of the 21-acre site from H (Holding) zone to R1-7500 (Single Family Residential) zone. Clearly, it was understood at that time that the underlying zoning following the annexation was H (Holding). The Planning Commission denied the application.

4) *1973 Adoption of the General Plan and General Plan Map.*

A General Plan and Map was approved by the City Council in June of 1973, by the adoption of Resolution 69-73.

5) *1973 Consideration of Land Use Amendments for the Hidden Lakes Study Area.*

On December 12, 1973 the City Council approved Resolution 154 entitled "Amends General Plan - Hidden Lakes Study Area." Said Resolution was unsigned and it is unclear from a review of the City Clerk records whether and what exhibit was or was intended to be attached to said resolution.

6) *The Hidden Lakes Specific Area Plan.*

Sometime between the adoption of the 1973 General Plan and the 1976 zoning amendment for Tract 4744, the City Council adopted the Hidden Lakes Specific Area Plan as an amendment to the 1973 General Plan. The Hidden Lakes Area Specific Plan included, inter alia, Policy 32.4231 which provided that "the base density for the plan area shall permit one dwelling unit per 7,500 square feet of site area as allocated under a R-1 Zoning classification".

7) *The Adoption of the 1974 Zoning Ordinance and Map*

At its meeting of May 22, 1974, the City Council approved Ordinance No. 788 a Zoning Ordinance and Zoning Map for the City (in atlas format) that zoned the Subject Property as Mixed Use District- Open Space/Recreational Facilities (M-OS/RF). A copy of that ordinance with excerpts of the minutes from five City Council meetings held where this map was discussed, January 2, 1974, April 3, 1974, April 17, 1974, May 22, 1974 and finally June 5, 1974 and finally June 5, 1974, when the second reading of the ordinance occurred was reviewed and considered by the City Council. The Council finds that the zoning listed for the property in said map as Mixed Use District - Open Space/Recreational Facilities (M-OS/RF) was in error and was inconsistent with the Hidden Lakes Specific Area Plan base density designation of R-1-7500.

8) *The 1976 Zoning Amendment for Tract 4744.*

On July 6, 1976, the Planning Commission approved a rezoning and tentative map for a 61-acre site not including but adjacent to the Subject Property. In the Environmental Impact Report for Tract 4744, the City Planning Director concluded that the Subject Property was "highly developable residential property".

9) *The 2010 General Plan Map Update.*

On August 10, 2010, the Planning Commission held a noticed public hearing on and recommended that the City Council amend the Martinez General Plan by the adoption of a new General Plan Land Use Map for the City and related text amendments to reference the updated map. The stated purpose for the action to adopt a new General Plan Land Use Map was to memorialize changes to the City's General Plan and associated Land Use Maps made since 1973 when the General Plan was adopted and to update and consolidate figures contained within the General Plan. On October 6, 2010, the City Council held a noticed public hearing and approved the General Plan amendment adopting a new updated Land Use Map and references. The updated Land Use Map (LU-Map 1), designated the Subject Property as Open Space and Recreation, Permanent. Because the 2010 Land Use map was not intended to make any actual substantive Land Use Designation amendments, it merely carried forward the land use designation for the Subject Property from the original 1973 General Plan Land Use Policy Map. It did not take into consideration the actions of the adoption of the Hidden Lakes Specific Area Plan and the base density designation.

B. Findings of Fact Relating to the Appeal.

A) *General Plan Amendment.*

The Applicant's appeal and position appear to be as follows:

- 1) *The Subject Property is not currently designated as Permanent Open Space/Recreational use.*
- 2) *Resolution 154 is not signed and that the exhibit for Resolution 154 contained an "erroneous notation", cannot be ascertained to be the proper exhibit/version and is not an "official copy" of the resolution, that the City cannot describe who made the "notation" and that the notation appears to be a clerical "mistake".*
- 3) *The applicant has also stated a position that there is "clearly an error" because the map in question includes a Permanent Open Space designation for the remainder of Parcel 16 which was subsequently developed with residential uses.*
- 4) *Section 32.4231 of the Hidden Lakes Specific Area Plan (Area Plan) which states that "The base density for the plan area shall permit one dwelling unit per 7,500 square feet of site area as allocated under a R-1 Zoning classification.", is a controlling statement which applicant believes designates all property within the Hidden Lakes Specific Area Plan as residential.*

Based upon the Record as a whole, the City Council hereby finds that:

- 1) *The Findings of Fact Regarding the Land Use History of the Subject Property set forth in section A above, are true and correct and are based upon the official records of the City.*
- 2) *Resolution 154 is unsigned and it cannot be ascertained with certainty what action was intended by said resolution due to the fact that the exhibit thereto was not contained in the City Clerk's official files.*

B. Zoning Amendment.

In light of the findings of fact regarding the General Plan as set forth above, the City Council finds that the zoning designation set forth in Ordinance 788, is inconsistent with the General Plan.

B) Intent of the City Council in the 1970's.

Subsequent to the filing of the Appeal, the Applicant provided to staff some additional information. This additional information received includes declarations from former Mayor John Sparacino, County Assessor Gus Kramer, Christine Dean, and Dina Tasini and an affidavit from James Busby.

1. *The Sparacino declaration notes that the City did not intend to buy the golf course property, nor pay to "take" the property. It also states that Mr. Sparacino does not recall a map designating the property as Open Space.*
2. *The Kramer declaration includes information regarding the tax assessments for the Subject Property. Mr. Kramer states that by reviewing the tax bills for a particular property he is "usually able to determine" the zoning of the property. He states that the tax bill for the Subject Property shows ad valorem taxes payable by residentially zoned property and that based thereon, the Subject Property has been "classified" as residentially- zoned for 120 lots since the 1980s.*
3. *The affidavit of Mr. Busby submitted by the applicant states that he was the developer of subdivision tract 4774. This is the subdivision that surrounds the Subject Property. He states that he purchased the land surrounding the golf course from Mr. Coward and that he wanted to also purchase the Subject Property (golf course), but that Mr. Coward would not sell it. Mr. Busby states that at "no time has the City represented that any of the "Pine Meadows" property or the golf course to be a part of the "Hidden Lakes Park.*
4. *The declaration of Christine Dean provided land use history and information about records*

kept by the property owner.

5. The declaration of Dina Tasini stated that she could not find any legislative action to support the Open Space/Recreation land use designation on the Subject Property.

Based upon the above, and the Record as a whole, the City Council finds that there has been substantial evidence presented on appeal which would establish that the Subject Property has a residential General Plan Land Use designation with zoning of R-1-7500 (currently referred to as R-7.5) As such, the City Council finds that a General Plan and Zoning amendment are not required in order to consider a subdivision of the Subject Property for residential uses consistent with R-7.5."

PROJECT DESCRIPTION

The proposed project is a 92-unit residential subdivision. The vesting tentative subdivision map (Figure 3) for the proposed project would facilitate the development of 92 single family residential units on approximately 26.77 acres north of the intersection of Center Avenue and Vine Hill Way. The proposed project would also require a tree removal permit to remove 29 trees protected under the City of Martinez Tree Protection Ordinance. The project applicant has requested approval of the vesting tentative map, preliminary grading and drainage plan, preliminary utility plan, preliminary stormwater control plan, a preliminary tree removal and demolition plan, and a conceptual landscape plan. These preliminary plans are contained in Appendix A.

Vesting Tentative Subdivision Map

The project would create 92 residential lots and five non-residential parcels as shown in Table 1. The proposed project includes 92 residential lot sizes that range from 7,500 square feet to 13,227 square feet with an average of 8,281 square feet. The overall site density is 4.4 dwelling units per net acre (net acreage does not include Parcel E).

Table 1: Project Characteristics

Component	Description	Size
Lots 1 - 92	Residential lots	17.429 acres (total)
Parcel A	Private open space/drainage	7,716 square feet
Parcel B	Private open space/drainage	98,017 square feet
Parcel C	Private open space/drainage	48,696 square feet
Parcel D	Emergency vehicle access easement	2,465 square feet
Parcel E	Right-of-way (Streets A-J)	248,557 square feet
Parcel F	Private open space/drainage	1,448 square feet

SOURCE: CARLSON, BARBEE & GIBSON, INC., 2017

Site Access

Access to the site will be from two new intersections, one on Morello Avenue and one on Center Avenue, as shown in the vesting tentative map (see Figure 3). An emergency vehicle access will be provided on Parcel D.

Storm Drainage

The project site will be served by on-site storm drain system that will include storm drain pipes in the proposed street rights-of-way that will collect the drainage from the residential lots, except Lots 61 and 62, and convey the drainage to two bio-retention areas (Parcel A, located at the northwest corner of the project site, and the northeast corner of Parcel C) and will also connect to the existing storm drain lines in Morello Avenue. Storm drainage from Lots 61 and 62 and Parcel B would be collected in a concrete ditch located generally along the north and eastern borders of Parcel B and

would be conveyed to a storm drainage pipe in 'A' Street. See the Vesting Tentative Subdivision Map Preliminary Stormwater Control Plan (Attachment A).

Fencing

The project's residential lots will have a six-foot wooden fence at the rear and sides of each lot.

Landscaping

The project would provide an open space corridor along Vine Hill Way and Center Avenue that separates the proposed residential lots from the existing roadway. This corridor would be planted with a variety of plants and grasses, including manzanita, wild lilac, toyon, porcupine grass, deep grass, and wild rose. The project would plant 278 trees, as shown in the Conceptual Landscape Plan (Figure 4), with the majority of trees planted in the residential lots in the interior of the project site. Coast live oaks would be planted at the northeast corner of the project site and Vine Hill Way and purple plums would be planted where the proposed 'A' Street would connect with Morello Avenue.

Public Services and Utilities

Public services and utilities (water, sewer, storm drainage, natural gas, and electric) and telecommunication infrastructure would be extended to serve the proposed project. The project would connect to an existing sewer line in Rolling Hill Way, located near the intersection of Rolling Hill Way and Vine Hill Way and to an existing 6-inch water line located in Vine Hill Way. Storm drainage from the site would be collected as previously described and conveyed to two bio-retention areas (Parcel A, located at the northwest corner of the project site, and the northeast corner of Parcel C) and will also connect to the existing storm drain lines in Morello Avenue.

The proposed project would connect to existing City infrastructure to provide water and storm drainage utilities. MVSD would provide wastewater collection, treatment, and disposal services. Police protection service would be provided by the City of Martinez. Contra Costa County Fire Protection District (CCCFPD) would provide fire protection service. School services would be provided by the Mt. Diablo Unified School District. The project site currently has gas and electricity provided by Pacific Gas & Electric, which will continue to provide these services to the future residences.

Demolition

Existing structures, including the single-story building, storage units, maintenance sheds, and improvements, including the former irrigation basin, asphalt-paved parking areas, former golf course, and associated landscaping, would be demolished; the majority of the existing trees on the site, including 29 protected trees would be removed (see the Preliminary Tree Removal and Demolition Plan in Appendix A).

REQUESTED ENTITLEMENTS AND APPROVALS

The City of Martinez is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of the California Environmental Quality Act (CEQA), Section 15050. Implementation of the project requires approvals from the City of Martinez, including but not limited to:

- Adoption of the Mitigated Negative Declaration (MND);
- Adoption of the Mitigation Monitoring and Reporting Program (MMRP);
- Approval of the Vesting Tentative Subdivision Map to subdivide the project site to accommodate:

- 92 single family residential lots,
 - 3 open space/drainage lots,
 - 1 emergency vehicle access lot, and,
 - Right-of-way (Streets A through I);
- Approval of Design Review; and
- Approval of improvement plans, grading permit, and building permits.

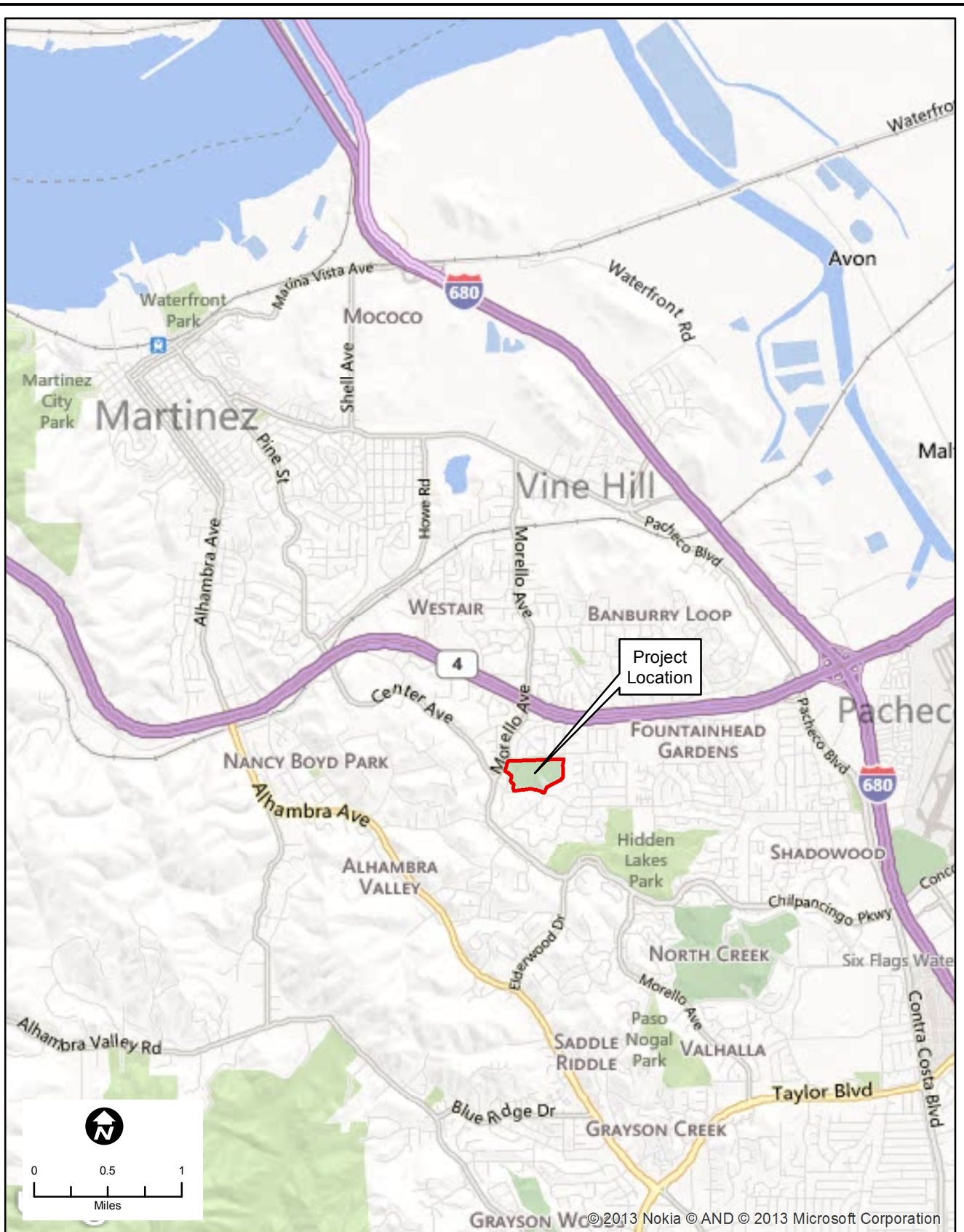
OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED (E.G., PERMITS, ETC.)

- Regional Water Quality Control Board (RWQCB) – Construction activities would be required to be covered under the National Pollution Discharge Elimination System (NPDES), which would require the development to prepare a Storm Water Pollution Prevention Plan (SWPPP) and file a Notice of Intent with the RWQCB.
- Bay Area Air Quality Management District (BAAQMD) – Indirect Source Review.

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VINE HILL

Figure 2: Project Vicinity

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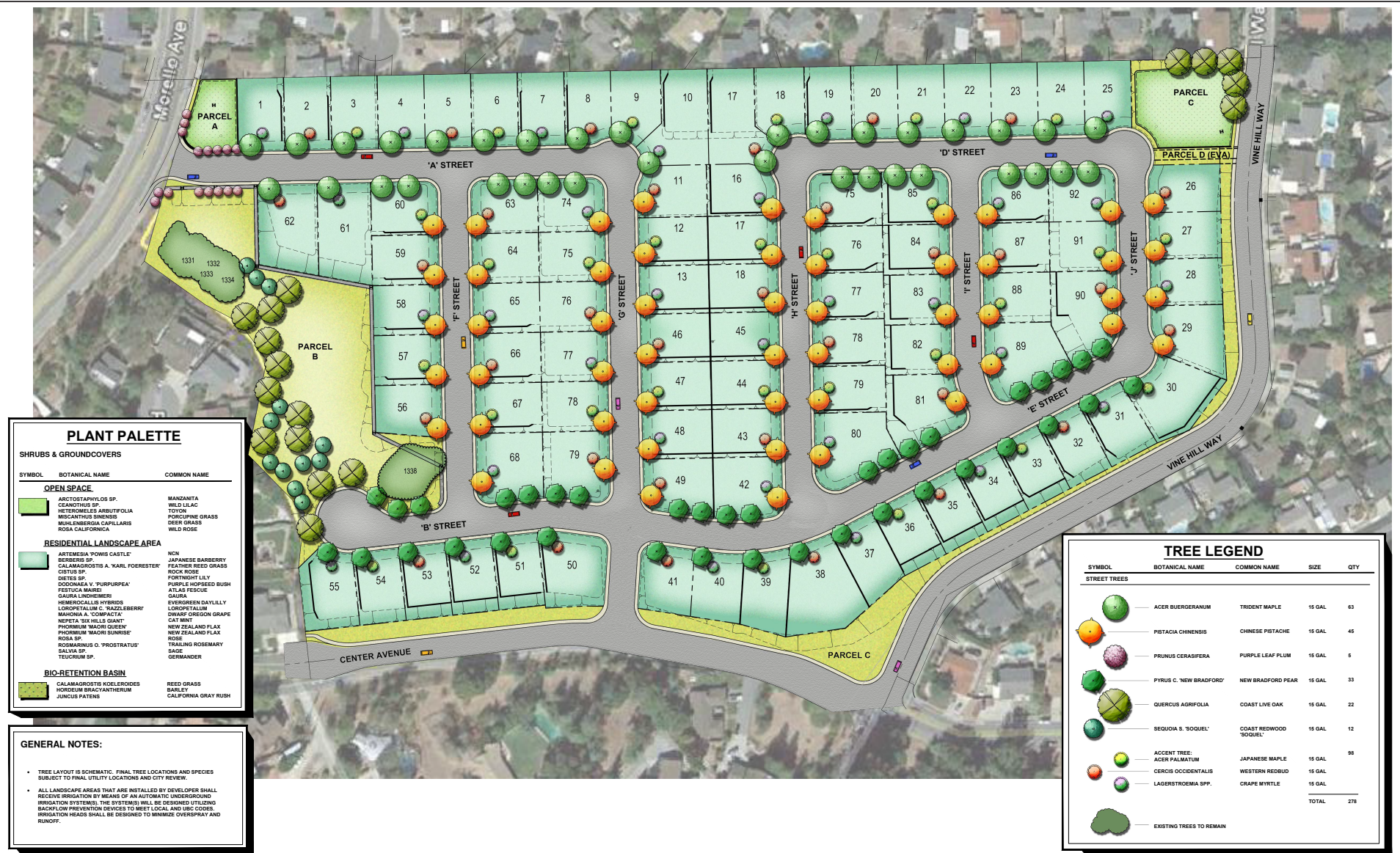
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Figure 3: Vesting Tentative Subdivision Map Site Plan
See Appendix A for full Vesting Tentative Map materials

Source: Carlson, Barbee, and Gibson, 2017

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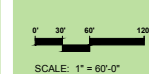


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VINE HILL
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OVERALL SITE PLAN
CONCEPTUAL LANDSCAPE PLAN
MARCH 2018

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L-1
Project No. 05913

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Figure 4: Landscaping Plan

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

X	Aesthetics		Agriculture and Forestry Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Geology/Soils
X	Greenhouse Gas Emissions	X	Hazards and Hazardous Materials	X	Hydrology/Water Quality
	Land Use/Planning		Mineral Resources	X	Noise
	Population/Housing		Public Services		Recreation
X	Transportation/Traffic	X	Tribal Cultural Resources	X	Utilities/Service Systems
X	Mandatory Findings of Significance				

DETERMINATION:

On the basis of this initial evaluation:

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

Christina Ratcliffe, Economic and Community Development Director

Date

EVALUATION INSTRUCTIONS:

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

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) The significance criteria or threshold, if any, used to evaluate each question; and
 - b) The mitigation measure identified, if any, to reduce the impact to less than significant.

EVALUATION OF ENVIRONMENTAL IMPACTS:

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

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

ENVIRONMENTAL CHECKLIST

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

I. AESTHETICS

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

Responses to Checklist Questions

Response a) The project would not have a substantial adverse effect on a scenic vista.

In general, a scenic vista includes areas with views of scenic resources, scenic water resources, and other scenic resources from, or to a project site. While the General Plan does not contain any policies that specifically address scenic vistas nor does it define or identify any scenic vistas, the General Plan includes a figure titled Visual Elements that identifies major scenic routes, major visual gateways, visually significant hilltops and ridges, visually significant hillside, visually significant riparian vegetation, visually significant skyline vegetation, marsh, and old orchard. The project site does not have any visual elements identified in the General Plan Visual Elements figure. There are not significant views of identified Visual Elements from the public viewing points that include the project site in the foreground, meaning that views of the project site from Morello Avenue, Center Way, and Vine Hill Way, do not include significant views of Visual Elements, as identified in the General Plan, in the foreground or background of the viewshed. Development of the project site thus would not have a substantial adverse effect on a scenic vista. This impact is considered *less than significant*.

Response b): The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

There are two designated State Scenic Highways in Contra Costa County. State Route 24 is a designated State Scenic Highway from the east portal of the Caldecott Tunnel to State Route 680 near Walnut Creek. This designation then continues onto State Route 680 to the Alameda County line. The project site is not located within either of these a State Scenic Highways, nor is it visible from either highway. The proposed project would not substantially damage scenic resources,

including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Implementation of the proposed project would have ***no impact*** relative to this topic.

Response c) The project would not substantially degrade the existing visual character or quality of the site and its surroundings. This impact is less than significant.

For analysis purposes, the visual character of the project site and its surroundings is discussed in terms of the foreground and background viewshed. The foreground consists of views of the project site. The background viewshed is often referred to as the broader viewshed which includes the project site and limited views of ridgelines and trees beyond the project site. An impact would generally occur if a project would change the view to background elements of the broad viewshed, such as obscuring public views of significant ridgelines or scenic areas, or remove or modify any visually important trees, historic buildings, or topography in the foreground. Zoning Code Section 22.34.030 identifies "visually significant areas" those labeled as "visually significant hilltops and ridges," "visually significant hillsides," "visually significant riparian vegetation" and "visually significant skyline vegetation" on the map entitled "visual environment" within the open space and conservation element of the General Plan. The project site, including the trees and hillside topography, are not identified as significant visual resources on the Visual Elements figure of the General Plan.

Existing views onto the project site from surrounding public areas are of open chain link fencing and trees in the foreground with the former golf course, which consists of, gently rolling topography as well as paved areas and buildings, and trees in the mid-ground. Irrigation of the former golf course has ceased, causing the groomed, grassy hillsides to revert to annual grassland. The proposed project would result in changes to the views of the project site from the public viewpoint by adding residential features to a site that is largely open and vegetated. With the exception of five protected trees on Lot B, the project would remove existing trees from the project site, including 29 protected trees as discussed in Chapter IV, Biological Resources. The project would grade the project site so that the lots generally slope from the southwestern portion of the project site downward to the north and downward to the northwest; this would be similar to the existing topography but would create level lots for each of the residential parcels. Finished elevations would range from a high of about 244 feet at the southwestern portion of the project site, which would slope downward to the north and northwest to an elevation of 197 feet and downward to the northeast to an elevation of 175 feet. A total of 278 new trees would be planted as shown on Figure 4.

The City Council has determined that the site is designated and zoned for residential (Resolution 011-17). The project's proposed densities are consistent with the level of development allowed by Resolution 011-17. The residential character of the project site would be similar to the surrounding residential neighborhoods.

Views of the project site along Morello Avenue would be buffered by the trees to be planted along the Morello Avenue/project site boundary and by the open space features provided by Parcel A (private open space and bio-retention area) and Parcel B (private open space and drainage) as shown by Figure 4.

The proposed project provides a landscaped setback along Center Avenue and Vine Hill Way (see Figure 4), so views of the project site from these locations will be of the existing sidewalk, followed by a landscaped buffer separating the sidewalk from six-foot wooden fences that will be constructed at the rear of the lots backing up to Center Avenue and Vine Hill Way. Views of the project site at the northernmost portion of the project site at Vine Hill Way will be of the open space

and bio-retention basin provided by Parcel C, as well as trees to be planted on the upper portion of Parcel C at Vine Hill Way. Lots 26 through 36, adjacent Vine Hill Way, will be set back from the sidewalk with a landscaped greenbelt approximately 16 feet wide; the typical section shows that there will be a relatively level landscaped buffer of up to 9 feet and an additional buffer of up to 7 feet that will slope upward to the residential lot lines (see Attachment A, Preliminary Grading and Drainage Plan, Section C-C). Lots 37 and 38 (the southern portion of the project site along Vine Hill Way and Center Avenue) will have a wider buffer than Lots 39 through 41 and the buffer will slope upward from the roadway to the proposed fence line. From Lots 39 through 41 (the southern portion of the project site along Center Avenue), there will be an approximately 25-foot buffer from the roadway to the proposed fence line. From Lots 50 through 55, there will be an approximately 20.5-foot landscaped greenbelt adjacent Center Avenue and the residential lots will slope downward from the fence at the top of the greenbelt toward the proposed residential home for an additional width of 1 to 20 feet, with the least setback and slope at Lot 55, then generally increasing along Lots 54 through 50.

Views of the project site would be primarily of the landscaped features separating the proposed residential uses from existing roadways. View of the residences would be visible in background views of the site, as shown in Figures 5 and 6.

In order to assess the foreground visual impacts of the proposed project, as well as the changes to the existing visual character or quality of the site and its surroundings two visual simulations were performed for the proposed project by WHA. The locations of the visual simulations are presented below. The visual simulations are provided following this text as Figure 5 and 6.

- Visual Simulation: View 1: Vine Hill Way View Southwest
- Visual Simulation: View 2: Vine Hill Way View North/Northwest

View 1 illustrates an existing view of the former golf course with a chain link fence and frontage landscaping (mature trees) that are moderately blocking views across the course. View 1 (Figure 5) represents views of the site from Parcel C and Lots 26 through 30. The topography rolls slightly down and then back up. The visual simulation illustrates a foreground with frontage landscaping that largely maintains the existing topography. This foreground area also maintains the openness of the existing foreground view. The developed residential subdivision is visible in the background view of this simulation. Where the residential lots are adjacent to Vine Hill Way, the landscaped buffer will slope upward toward the rear fence line of the residential lots. The landscaping buffer provides visual relief through separation from the public right-of-way.

View 2 illustrates an existing view of the former golf course with a chain link fence and frontage landscaping (mature trees) that are moderately blocking views across the course. View 2 (Figure 6) represents views of the site looking north along Vine Hill Way from the area of Lot 30. As shown in Figure 6, the existing topography rolls slightly down, going from south to north. The visual simulation illustrates a foreground with frontage landscaping and modified topography that slopes upward toward the back yard of proposed residential housing. This landscaping area provides some visual relief through separation from the public right-of-way; however, the slope up to the residential backyards combined with the two story building represents a change in existing views from the grassy, treed area to a landscaped strip and residential uses. There is no background view from this view point because of the residential structures that are elevated by the topography modification.

The open space lots and landscaped setbacks along Morello Avenue, Center Avenue, and Vine Hill Way provide for an extended view area from the road way, continuing the open character of the site. The City's Design Guidelines Views of the project site would change from an open area with trees and seasonal grasses to a landscaped, residential subdivision. Views of chain link fencing and trees in the foreground along Vine Hill Way and Center Avenue would shift to views of a landscaped buffer planted with grasses and shrubs and residential fencing and homes located behind the buffer.

The project will be required to comply with the City's General Plan and Municipal Code requirements, including obtaining a grading permit and ensuring all grading and improvements conform with the City's requirements. The General Plan includes specific requirements related to development in the Hidden Lake Hills Specific Area Plan:

32.34 Proposed development must be compatible with the Specific Area Plan with respect to natural terrain and vegetation, architectural and site design quality, adequacy of access and traffic impact.

32.341 Roads and buildings should be located in a manner which minimizes disturbance of the natural terrain and vegetation.

The project is consistent with General Plan policies related to visual character including Policies 32.34 and 32.341, by ensuring that the project reflects the existing visual form of the project site, particularly through extensive use of open features (Parcels A, C, and F and the landscaped setbacks that maintain sloped and hilly characteristics) adjacent public roads. The project was designated for residential uses by the General Plan and Zoning Code (Resolution 011-17) and will result in residential uses that are compatible with the neighborhood and consistent with the residential character of the area. As previously identified, the project site, including the topography, vegetation, and former golf course features, is not identified as a significant visual resource by the General Plan or Zoning Code and the conversion of the site to a residential use thus would not have a significant impact on significant visual resources and views. The project would not substantially degrade the existing visual character or quality of the project site and its surroundings beyond what was envisioned as a consequence of the implementation of the General Plan. This is a *less than significant* impact.

Response d): The project would create a new source of light or glare which could adversely affect day or nighttime views in the area. This impact is less than significant with incorporation of mitigation.

There is a potential for the proposed project to create new sources of light and glare. Examples would include construction lighting, street lighting, security lighting along walkway, exterior building lighting, interior building lighting, automobile lighting, and reflective building materials. The Martinez Municipal Code Chapter 21.28, Section 21.28.020 states that the subdivider shall provide a street lighting system that shall conform to City specifications. The locations of street lights shall be prescribed by the City Engineer. (Ord. 1103 C.S. § I (part), 1987; Prior code § 4522.). The City Engineer reviews street lighting plans with improvement plan submittals to ensure that the street lighting is designed to meet minimum safety and security standards and to avoid spillover lighting to sensitive uses. To avoid a potential impact, residential building lighting must be consistent with the surrounding residential areas and must include luminaries that cast low-angle illumination to minimize incidental spillover of light onto adjacent residences. Fixtures that project light upward or horizontally would cause a potential impact. Additionally, luminaries must be shielded and directed away from areas adjacent to the project site. The City also reviews building

plan submittals to ensure that the reflective building materials are minimized to avoid glare. To avoid a potential impact, residential building materials must be consistent with the surrounding residential areas and must include materials that minimize incidental glare. Materials such as metal siding are an example of building materials that could cause a potential impact. The following mitigation measures are intended to ensure that the proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. With implementation of the below mitigation measures, the project would have a ***less than significant*** impact relative to this topic.

Mitigation Measure Vis-1: *Outdoor lighting at the residential lots, including building and landscape lighting, shall be designed so that light is not directed off the site (i.e. onto adjacent lots or into the public right-of-way) and the light source is shielded downward from overhead viewing and from direct off-site viewing. Light spill and glare shall not exceed 0.1 foot-candle on adjacent properties or the public right-of-way. These requirements shall be shown on the plot plans for each single family unit.*

Mitigation Measure Vis-2 *Street light fixtures shall use LED or other similar lighting fixture approved by the City of Martinez and shall be installed and shielded in such a manner that no light rays are emitted from the fixture at angles above the horizontal plane of the light source. High-intensity discharge lamps shall be prohibited. Street lighting plans shall be submitted with project improvement plans for City review and approval.*

Mitigation Measure Vis-3 *Building plans shall incorporate materials that minimize glare to the extent feasible. Metal siding for roofing shall be prohibited, unless paint or other non-glare materials are applied to the material to minimize the glare. Building plans shall be submitted to the City for review and approval.*

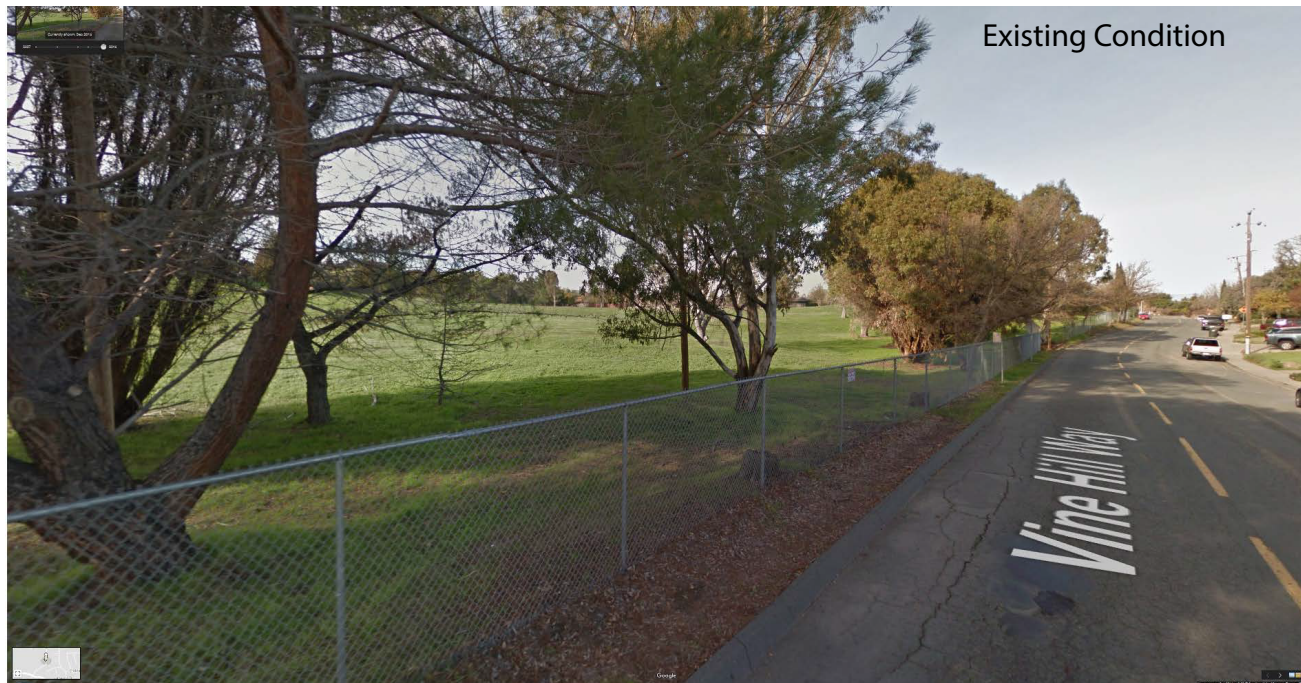


Figure 5
Visual Simulation: View 1
Existing and Proposed

WHA
DeNova Homes

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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Existing Condition



Proposed Condition

Figure 6
Visual Simulation: View 2
Existing and Proposed



De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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II. AGRICULTURE AND FORESTRY RESOURCES

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

Responses to Checklist Questions

Response a): The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

The project site does not contain prime farmland, unique farmland, or farmland of statewide importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The proposed project would not result in the conversion of farmland to non-agricultural use. Implementation of the proposed project would have **no impact** relative to this issue.

Response b): The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

The project site is not zoned for agricultural use nor is it under a Williamson Act contract. The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. Implementation of the proposed project would have **no impact** relative to this issue.

Response c): The project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).

The Project site is not forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526). The proposed project would not

conflict with existing zoning for, or cause rezoning of, forest land or timberland. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response d): The project would not result in the loss of forest land or conversion of forest land to non-forest use.

The project site is not forest land. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response e): The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

The project site does not contain agricultural land or forest land. The proposed project does not involve changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use, or conversion of forest land to non-forest use. Implementation of the proposed project would have ***no impact*** relative to this issue.

III. AIR QUALITY

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Conflict with or obstruct implementation of the applicable air quality plan?		X		
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	

Responses to Checklist Questions

Response a): The project could conflict with or obstruct implementation of the applicable air quality plan. This impact is less than significant with implementation of mitigation.

CEQA requires lead agencies to determine whether a project is consistent with applicable air quality plans.

2017 Clean Air Plan Consistency Analysis

In order to make the required consistency determination, the BAAQMD *California Environmental Quality Act Air Quality Guidelines* dated May 2017 (2017 BAAQMD Guidelines) recommends the following methodology. The lead agency must consider the following questions and recommendations:

1. Does the project support the primary goals of the applicable Air Quality Plan?

The recent 2017 Clean Air Plan, *Spare the Air, Cool the Climate* (2017 Plan), focuses on two closely-related goals: protecting public health and protecting the climate. Consistent with the GHG reduction targets adopted by the state of California, the plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

The 2017 Plan updates the prior Bay Area Ozone Plan, the *2010 Clean Air Plan*, pursuant to air quality planning requirements defined in the California Health & Safety Code. To fulfill state ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors – reactive organic gases (ROG) and nitrogen oxides (NO_x) – and reduce transport of ozone and its precursor to neighboring air basins. This is important because, despite progress, the Bay Area does not yet fully attain state and national ozone standards. In

addition, the Plan builds upon and enhances the Air District's efforts to reduce emissions of fine particulate matter (PM) and toxic air contaminants (TACs).

The 2017 BAAQMD Guidelines indicates that if approval of a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered to support the primary goals of the AQP and is consistent with the 2010 Clean Air Plan, which was the most current version of the Clean Air Plan at the time the 2017 BAAQMD Guidelines were prepared. The 2017 Plan includes similar goals as the 2010 Plan. Therefore, it is concluded that if the project does not result in significant and unavoidable air quality impacts after the implementation of appropriate mitigation, the project may be considered consistent with the 2017 Plan. As shown in the discussion contained in Responses b, c, d, and e (Section III Air Quality) of this Initial Study, the proposed project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation. As such, the project is considered consistent with the 2017 Plan and the 2010 Plan.

2. Does the project include applicable control measures from the AQP?

The BAAQMD indicates that agencies approving projects should require that they include all air quality plan control measures that can feasibly be incorporated into the project design or applied as mitigation, or justify the reasons, supported by substantial evidence, why a measure or measures are not incorporated into the project. Projects that incorporate all feasible air quality plan control measures may be considered consistent with the 2010 CAP. Similarly, it is anticipated that projects that incorporate all feasible air quality plan control measures from the 2017 CAP are consistent with the 2017 CAP.

The 2017 CAP contains 40 stationary source control measures, 23 transportation control measures, 2 energy control measures, 4 building control measures, 4 agriculture control measures, 3 natural and working lands control measures, 4 waste management control measures, 2 water control measures, and 3 super-GHG control measures aimed at reducing air pollution in the Bay Area. The 2017 CAP control measures are available for review in full text at (http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_proposed-final-cap-volume-2-pdf.pdf?la=en). Table 2 summarizes the control measures applicable to residential development projects similar to the proposed project. These measures are not applicable directly to an individual project, but rather are implemented by BAAQMD through rulemaking, facilitation of best policy approaches, or providing outreach and education, as shown in Table 2.

Table 2: Applicable 2017 Clean Air Plan Control Measures

<i>MEASURE</i>	<i>TIMING</i>	<i>RULEMAKING</i>	<i>FACILITATE BEST POLICIES</i>	<i>OUTREACH AND EDUCATION</i>
SS 30 - Residential Fan Furnace Types: Reduce NOX emission limits on new and replacement central furnace installations. Explore potential Air District rulemaking options regarding the sale of fossil fuel-based space and water heating systems for both residential and commercial use.	2019	X		
SS 34 - Wood Smoke: Consider further limits on wood burning, including additional limits to exemptions from Air District Rule 6-3: Wood	2019	X		

Burning Devices.				
SS 36 – PM from Trackout: Develop new Air District rule to prevent mud/dirt and other solid trackout from construction, landfills, quarries and other bulk material sites.	2017 (Rule 6-6)	X		
SS 38 – Fugitive Dust: Consider applying the Air District’s proposed fugitive dust visible emissions limits to a wider array of sources.	No Year	X		
TR 16 – Indirect Source Review: Consider a rule that sets air quality performance standards for new and modified development projects.	2018	X		
BL 2 – Decarbonize Buildings: Explore potential Air District rulemaking options regarding the sale of fossil fuel-based space and water heating systems for both residential and commercial use. Explore replacement incentives for appliances. Update Air District guidance documents.	No Year		X	X

These measures applicable to residential development are structured as programs to be implemented by the BAAQMD through rulemaking, funding, best policy facilitation, or outreach and education, as described in the 2017 Plan. As proposed, the project does not fully address the requirements of the 2017 Plan and the project’s potential to conflict with the 2017 Plan is a potentially significant impact.

Mitigation measure Air-1 includes provisions to: ensure that the project would implement best management practices for operation of the project, including using low high efficiency, low NOx furnaces and fans consistent with the intent of SS 30 and BL 2 and prohibiting wood-burning devices consistent with the intent of SS 34. Mitigation measure Air-2 ensures that best management practices are implemented during the construction phase, including provisions to reduce PM emissions from trackout and to reduce fugitive dust, consistent with the intent of SS 36 and SS 38. No performance standards have been adopted yet to implement TR 16; the project has been reviewed for consistency with currently adopted air quality thresholds established by BAAQMD.

As described above, mitigation measures Air-1 and Air-2 would ensure that the project supports the primary goals of the 2017 Plan and does not disrupt or hinder implementation of any 2017 Plan control measures. With implementation of the referenced mitigation measures, the proposed project would not conflict with or obstruct implementation of the 2017 Plan and would have a ***less than significant*** impact relative to this topic.

Mitigation Measure Air-1: As part of the City’s design review and entitlement process, the City shall require the project, including future building plans, to implement the following:

- Only energy efficient, natural gas burning fireplaces shall be installed in the housing units to reduce Area Source criteria pollutants.
- Only low Volatile Organic Compound paint (150 g/L) (interior and exterior) shall be used on the project site.
- The developer shall install high efficiency appliances (refrigerator, fans, washers).
- The developer shall install high efficiency, low NOx furnaces and fans.

- *The developer shall install low-flow faucets, toilets, showers.*
- *The developer shall install water-efficient irrigation systems.*

Mitigation Measure Air-2: *To reduce construction related emissions, the project applicant shall implement the following the Bay Area Air Quality Management District Construction Mitigation Measures during project construction:*

- *All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.*
- *All haul trucks transporting soil, sand, or other loose material off-site shall be covered.*
- *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.*
- *All vehicle speeds on unpaved roads shall be limited to 15 mph.*
- *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.*
- *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 California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.*
- *All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.*
- *Post a publicly visible sign with the telephone number and person to contact 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.*

Responses b,c): **The project would not violate any air quality standard, contribute substantially to an existing or projected air quality violation, nor result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).**

The U.S. Environmental Protection Agency (U.S. EPA) uses six "criteria pollutants" as indicators of air quality, and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). Each criteria pollutant is described below.

Ozone (O₃) is a photochemical oxidant and the major component of smog. While O₃ in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O₃ at ground level are a major health and environmental concern. O₃ is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) in the presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak O₃ levels occur typically during the warmer times of the year. Both VOCs and NO_x are emitted by transportation and industrial sources. VOCs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents.

The reactivity of O₃ causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O₃ not

only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Carbon monoxide (CO) is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. When CO enters the bloodstream, it reduces the delivery of oxygen to the body's organs and tissues. Health threats are most serious for those who suffer from cardiovascular disease, particularly those with angina or peripheral vascular disease. Exposure to elevated CO levels can cause impairment of visual perception, manual dexterity, learning ability and performance of complex tasks.

Nitrogen dioxide (NO₂) is a brownish, highly reactive gas that is present in all urban atmospheres. NO₂ can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O₃) and acid rain, and may affect both terrestrial and aquatic ecosystems. The major mechanism for the formation of NO₂ in the atmosphere is the oxidation of the primary air pollutant nitric oxide. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O₃. NO_x forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

Sulfur dioxide (SO₂) affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO₂ is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. Ambient SO₂ results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO₂ and VOCs are also considered particulate matter.

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO₂) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death.

Respirable particulate matter (PM₁₀) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by themselves, or in combination with other gases. Particulate matter is caused primarily by dust from grading and excavation activities, from agricultural activities (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM₁₀ causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

Fine particulate matter (PM_{2.5}) consists of fine particles, which are less than 2.5 microns in size. Similar to PM₁₀, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM₁₀, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the EPA created new Federal air quality standards for PM_{2.5}.

The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children. Particulate matter also impacts soils and damages materials, and is a major cause of visibility impairment.

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

Both the U.S. EPA and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels of contaminants that avoid specific adverse health effects associated with each pollutant.

The federal and California state ambient air quality standards are summarized in Table 3 for criteria pollutants. The federal and state ambient standards were developed independently, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone, PM_{2.5}, and PM₁₀.

The U.S. Environmental Protection Agency established new national air quality standards for ground-level ozone and for fine particulate matter in 1997. The 1-hour ozone standard was phased out and replaced by an 8-hour standard of 0.075 PPM. Implementation of the 8-hour standard was delayed by litigation, but was determined to be valid and enforceable by the U.S. Supreme Court in a decision issued in February of 2001. In April 2005, the Air Resources Board approved a new eight-hour standard of 0.070 ppm and retained the one-hour ozone standard of 0.09 after an extensive review of the scientific literature. The U.S. EPA signed a final rule for the Federal ozone eight-hour standard of 0.070 ppm on October 1, 2015, and was effective as of December 28, 2015.

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An “attainment” designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A “nonattainment” designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

The U.S. EPA designates areas for ozone, CO, and NO₂ as “does not meet the primary standards,” “cannot be classified,” or “better than national standards.” For SO₂, areas are designated as “does not meet the primary standards,” “does not meet the secondary standards,” “cannot be classified,” or “better than national standards.” However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

BAAQMD data indicates that the Bay Area has a state designation of Nonattainment for Ozone, PM₁₀, and PM_{2.5}, and is either Unclassified or Attainment for all other criteria pollutants. The Bay Area has

a national designation of Nonattainment for ozone and PM_{2.5} and is either unclassified or Attainment for all other criteria pollutants.

Table 3: Federal and State Ambient Air Quality Standards

POLLUTANT	AVERAGING TIME	FEDERAL PRIMARY STANDARD	STATE STANDARD	ATTAINMENT STATUS (FEDERAL/STATE)
Ozone	1-Hour	--	0.09 ppm	- /Nonattainment
	8-Hour	0.070 ppm	0.070 ppm	Nonattainment/Nonattainment
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm	Attainment/Attainment
	1-Hour	35.0 ppm	20.0 ppm	Attainment/Attainment
Nitrogen Dioxide	1-Hour	0.100 ppm	0.18 ppm	- /Attainment
	Annual	0.053 ppm	0.03 ppm	Attainment/ -
Sulfur Dioxide	Annual	0.030 ppm	--	- / -
	24-Hour	0.14 ppm	0.04 ppm	- /Attainment
	1-Hour	0.075 ppm	0.25 ppm	- /Attainment
PM ₁₀	Annual	--	g/m ³	- /Nonattainment
	24-Hour	150 ug/m ³	50 ug/m ³	Unclassified/Nonattainment
PM _{2.5}	Annual	12 ug/m ³	12 ug/m ³	Unclassified/Nonattainment
	24-Hour	35 ug/m ³	--	Nonattainment/ -
Lead	30-Day Avg.	--	1.5 ug/m ³	Attainment/ -
	3-Month Avg.	0.15 ug/m ³	--	

NOTES: PPM = PARTS PER MILLION, $\mu\text{G}/\text{M}^3$ = MICROGRAMS PER CUBIC METER

SOURCES: BAAQMD, 2018.

Operational Phase

BAAQMD has developed screening criteria to provide lead agencies with a conservative indication of whether the proposed project could result in potentially significant air quality impacts and/or significant contributions to cumulative air quality impacts. If all of the screening criteria are met by a proposed project, then the project would not have a significant operational impact and no further detailed air quality assessment is required.

The BAAQMD operational criteria pollutant screening size is 325 dwelling units. The proposed project is below the 325 dwelling unit threshold and thus would not result in a significant air quality impact nor would the project have a considerable contribution to a cumulative air quality impact from criteria air pollutant and precursor emissions.

Construction Phase

Construction Activities/Schedule: Construction activities as demolition of existing improvements, site improvements (grading, underground infrastructure, and topside improvements), and vertical construction (building construction and architectural coatings). Potential exposure to hazardous materials, including asbestos and lead from existing development on the project site is addressed in Section VIII, Hazards and Hazardous Materials.

Site Grading: The site grading phase of construction will begin with demolition of existing facilities including the former irrigation basin, existing power poles, existing structures, and existing paved areas as shown in Appendix A, Tree Removal and Demolition Plan, and preparation for grading. This step will include the use of dozers, backhoes, and loaders to strip (clear and grub) all existing pavement/concrete and organic materials and the upper half-inch to inch of soil from the site. Given the size of the project site, this task will take approximately two weeks and will include vehicle trips from construction workers.

After the project site is prepared grading will begin. This activity will involve the use of, graders, dozers, loaders, and backhoes to move soil around the project site to create specific engineered grade elevations and soil compaction levels. Due to the size of the project site, grading would likely take less than a week and will include vehicle trips from construction workers.

Building Construction/Architectural Coatings: Building construction involves the vertical construction of structures and site improvements, including paving/concrete and landscaping. This task will involve the use of forklifts, generator sets, welders and small tractors/loaders/backhoes. Architectural coatings involve the interior and exterior painting associated with the structures. The building construction/architectural coatings phase will take six to nine months for each residential structure.

Construction Emissions: BAAQMD has developed thresholds of significance for construction-related criteria air pollutant and precursor emissions to provide lead agencies with an indication of whether the proposed project could result in significant air quality impacts and/or significant contributions to cumulative air quality impacts. The BAAQMD thresholds are shown in Table 4 below.

A quantification of the maximum daily emissions of ROG, NO_x, PM₁₀, and PM_{2.5} that will be emitted by construction (expressed in pounds per day) has been performed. The California Emission Estimator Model (CalEEMod)TM (v.2016.3.2) was used to estimate construction emissions for the proposed project. The CalEEMod emissions output is provided in Appendix B. Table 4 shows the construction emissions.

Table 4: Unmitigated Construction Emissions

	ROG	NO_x	PM₁₀ TOTAL	PM_{2.5} TOTAL
EMISSIONS – TONS PER YEAR (UNMITIGATED)				
Year 1	0.42	4.14	0.55	0.34
Year 2	0.33	2.93	0.21	0.17
Year 3	1.34	1.99	0.14	0.11
AVERAGE DAILY EMISSIONS – POUNDS PER DAY (UNMITIGATED)				
Year 1	2.53	25.01	3.32	2.05
Year 2	2.00	17.69	1.27	1.03
Year 3	8.08	12.02	0.85	0.66
Average Daily Emissions BAAQMD Threshold	54	54	82	54
Threshold Exceeded in Any Year?	No	No	No	No

SOURCES: CALEEMOD (v.2016.3.2)

BAAQMD has identified a set of feasible control measures for construction activities. Some control measures should be implemented at all construction sites, regardless of size. Mitigation measure Air-2 requires that the project implement the BAAQMD construction air quality measures. As shown in Table 4, the project would not exceed the BAAQMD thresholds of significance for construction-related criteria air pollutant and precursor emissions.

In summary, construction-related and operation-related air quality impacts would be **less than significant** and would not have a considerable contribution to a significant cumulative air quality impact.

Response d): The project would not expose sensitive receptors to substantial pollutant concentrations.

Construction-related Impacts on Sensitive Receptors: The residents surrounding the project site are considered sensitive receptors. The proposed project would place additional sensitive receptors in the area. The operations of the proposed project would not contribute substantial concentrations of pollutants to sensitive receptors. The construction phase of the proposed project has the potential to increase pollution concentrations that would impact sensitive receptors. However, BAAQMD has identified a set of feasible control measures for construction activities and recommends that the determination of significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. If all of the applicable control measures will be implemented, then air pollutant emissions from construction activities would be considered a less than significant impact. Mitigation Measure Air-2 (presented above) would require the implementation of the BAAQMD Basic Construction Mitigation Measures. Implementation of Mitigation Measure Air-2 would reduce this impact to a **less than significant** level. Asbestos- and lead-containing particulate matter could be emitted to the atmosphere during demolition activities; this potentially significant impact is addressed in Section VIII, Hazards and Hazardous Materials; mitigation measures are provided to ensure that the potential for exposure to asbestos and lead, including airborne particulate matter, is less than significant (see Section VIII, Response b).

Toxic Air Contaminant Impacts on Sensitive Receptors: A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

The California Air Resources Board (CARB) published the *Air Quality and Land Use Handbook: A Community Health Perspective* (2007) to provide information to local planners and decision-makers about land use compatibility issues associated with emissions from industrial, commercial and mobile sources of air pollution. The CARB Handbook indicates that mobile sources continue to be the largest overall contributors to the State's air pollution problems, representing the greatest air pollution health risk to most Californians. The most serious pollutants on a statewide basis include diesel exhaust particulate matter (diesel PM), benzene, and 1,3-butadiene, all of which are emitted by motor vehicles. These mobile source air toxics are largely associated with freeways and high traffic roads. Non-mobile source air toxics are largely associated with industrial and commercial uses. Table 5 provides the California Air Resources Board minimum separation recommendations on siting sensitive land uses.

Table 5: CARB Minimum Separation Recommendations on Siting Sensitive Land Uses

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day. ¹
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more

<i>Source Category</i>	<i>Advisory Recommendations</i>
	than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloro-ethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

SOURCES: AIR QUALITY AND LAND USE HANDBOOK: A COMMUNITY HEALTH PERSPECTIVE" (CARB 2005)

The Project includes residential uses which are considered sensitive land uses. There are no source categories listed above that are proposed. Additionally, there are no source categories listed above that are within screening distances or minimum separation distances suggested for sensitive uses. State Route 4 is the closest freeway and is located over 1,150 feet from the project site. The Project is consistent with the *CARB Minimum Separation Recommendations on Siting Sensitive Land Uses* (2005). A health risk assessment is not warranted for any further assessment. Implementation of the proposed project would not result in an increased exposure of sensitive receptors to localized concentrations of TACs. This Project would have a **less than significant** impact relative to this topic.

Response e): The project would not create objectionable odors affecting a substantial number of people.

The proposed project would not generate objectionable odors. People in the immediate vicinity of construction activities may be subject to temporary odors typically associated with construction activities (diesel exhaust, hot asphalt, etc.). However, any odors generated by construction activities would be minor and would be short and temporary in duration. Implementation of the proposed project would have a **less than significant** impact relative to this topic.

IV. BIOLOGICAL RESOURCES

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

Background

A *Biological Resources Report* (Mosaic Associates 2011) was prepared for the proposed project. De Novo Planning Group peer reviewed the report in 2013 for use in the Initial Study published in March 2014. The full report is contained in Appendix C. This report contains the findings of a reconnaissance-level biological resources evaluation that was conducted for the project site at that time. The purpose of the biological resources evaluation was to characterize the habitats that were present on project site, and to provide an inventory of existing biological resources.

On October 12, 2017, Steve McMurtry, Principal Biologist with De Novo Planning Group, performed a reconnaissance-level survey of the project site. The conditions during this survey revealed that the project site had reverted to an annual grassland habitat as a result of the former golf course ceasing its operation. The following discussion describes the project site's conditions prior to the golf course ceasing its operation, as well as the current conditions of the project site.

Site Conditions- 2011: In 2011, vegetation within the study area included mixed planted woodland along the perimeter of the golf course, patches of non-native annual grassland, and golf

course turf on the fairways and tees, interspersed with landscape vegetation. The former golf course was irrigated nightly via a system of groundwater wells and City of Martinez water. The water was held in an artificial irrigation basin, which hosted a perimeter of wetland vegetation. The woodlands and turf, as well as the irrigation basin, provided habitat for a number of bird species. Landscape vegetation was present adjacent to the club house, and planted trees and shrubs were scattered throughout the course and fairways.

Judy Bendix and Amy Richey of Mosaic Associates performed a reconnaissance level survey of the site on May 31, 2011. The site was surveyed on foot and by golf cart during daylight hours. Additionally, two surveys of the irrigation basin feature were undertaken after sunset on warm, still nights to survey for amphibian life using the methods described in the *California red legged frog survey protocol* (USFWS 2005). These surveys were conducted on June 14 and June 23, 2011.

Mature woodland vegetation was present on the borders of the site. Landscape vegetation was present around the buildings and in the golf course greens. A man-made basin serving the golf course as a holding area for irrigation water was located on the project site. The site borders were wooded with a mature mixed woodland canopy, consisting of blue and red gum eucalyptus (*Eucalyptus globulus* and *E. camaldulensis*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), deodar cedar (*Cedrus deodara*), coast redwood (*Sequoia sempervirens*) and Monterey pine (*Pinus radiata*), among others. Most of the cover in this type was provided by introduced species that were planted at the perimeter of the site. Members of the shrub layer in this area include cotoneaster (*Cotoneaster pannosus*), oleander (*Nerium oleander*), mulberry (*Morus* sp.) and toyon (*Heteromeles arbutifolia*). These borders were not irrigated.

The woodlands provided habitat for a number of bird species, including bushtit (*Psaltiriparus minimus*), western scrub jay (*Aphelocoma californica*), black phoebe (*Sayornis nigricans*), and Swainson's thrush (*Catharus ustulatus*), among others. Raccoons (*Procyon lotor*) and domestic cats (*Felis domesticus*) are expected to forage on site.

Non-native annual grassland consisted of a ground layer of annual grasses and herbs, where emergent trees and shrubs were present. Fall temperatures and precipitation are major factors determining grassland composition, along with microclimatic differences (Sawyer et al. 2009). On the site, these areas were dominated by various non-native grasses, including Italian ryegrass (*Lolium multiflorum*), hare barley (*Hordeum murinum*), and wild oat (*Avena fatua*); and non-native herbaceous species including cut leaf geranium (*Geranium dissectum*), bristly ox-tongue (*Picris echinodes*), bedstraw (*Gallium aparine*) and hedgeparsley (*Torilis arvensis*).

Non-native annual grassland was also present in small areas of un-irrigated grasslands where mature woodland does not dominate on site. There is a steep hillside on the western border of the site that did not receive regular maintenance that also hosted this community.

Vegetation on the fairways and greens was golf course-maintained turf grasses. These areas were irrigated nightly via a system of groundwater pumping and municipal water. Landscape trees and shrubs were planted around the buildings, including Monterey pine, incense cedar (*Calocedrus decurrens*), oleander, and gum trees. Typical landscaping, with Kentucky bluegrass (*Poa pratensis*) and lilies-of-the-Nile (*Agapanthus* spp.), and cultivated roses, surrounds the club house and parking lot. The maintenance yard consisted of two buildings and two sheds, all surrounded by trees and shrubs, and a large compacted-soil area where several vehicles are parked. The landscape yard was fringed with several large piles of landscaping materials used for the golf course.

There was a man-made irrigation basin in the center portion of the golf course. This feature was lined, and filled by groundwater well pumping and city water. Two wells were present on the golf course property. Groundwater pumped from the wells to the irrigation basin supplied approximately 40% of the water used to irrigate the golf course, with the balance coming from the City of Martinez. The golf course manager reported that it takes approximately 12 hours to fill the irrigation basin with pumped water. The purpose of this irrigation basin was to hold water for nightly irrigation of the fairways and greens on the golf course, and it would not exist if pumping to this feature were discontinued. The golf course maintenance crew cleared wetland vegetation from the perimeter of the irrigation basin twice yearly to maintain open water for irrigation. The crew was clearing vegetation during the May 31 site visit.

The irrigation basin on site was fringed with cattails (*Typha angustifolia*) and bulrushes (*Schoenoplectus actutus*), and patches of umbrella sedge (*Cyperus eragrostis*) and creeping spikerush (*Eleocharis macrostachya*). A vacant red-winged blackbird (*Agelaius phoeniceus*) nest was observed in the cattails; numerous individuals of this species were present during all site visits. A pair of mallards (*Anas platyrhynchos*) nested in the irrigation basin in 2011. Mosquito fish (*Gambusia affinis*) were abundant in the irrigation basin, as well as aquatic insects, including giant diving beetle (*Dytiscus* sp.). Bats were determined to likely forage over the irrigation basin and the golf course during the evening hours. Dozens of Pacific treefrogs (*Hyla regilla*) were observed in this irrigation basin during the two nighttime surveys.

Additionally, there were a series of vegetated swales on site that convey water to the municipal storm drain system. These occurred along the northern and eastern boundaries of the site. The swale along the northern boundary likely received runoff from the irrigation basin as well as much of the northern portion of the site during rainy periods. A portion of it is perched against the fences and yards that abut the site. A short section of eroded ditch near the northeast corner of the site drained golf course runoff to the municipal storm drain system. There is a concrete U-ditch that conveys water from the western hillside to the northwestern corner of the site.

Site Conditions- 2017: In 2017, De Novo biologist Steve McMurtry visited the project site to identify current conditions. Vegetation within the study area had changed as a result of ceasing the golf course operations. Vegetation on the former fairways and greens was no longer golf course-maintained turf grasses, and was no longer irrigated nightly. Instead, this area had converted to non-native annual grassland similar to the patches of annual grassland that existed in certain areas of the site during the past. On the site, these areas were dominated by various non-native grasses, including Italian ryegrass (*Lolium multiflorum*), hare barley (*Hordeum murinum*), and wild oat (*Avena fatua*); and non-native herbaceous species including cut leaf geranium (*Geranium dissectum*), bristly ox-tongue (*Picris echioides*), bedstraw (*Gallium aparine*) and hedgeparsley (*Torilis arvensis*).

The landscape trees and shrubs remained around the buildings and along the perimeter of the project site. This includes a mature mixed woodland canopy, consisting of blue and red gum eucalyptus (*Eucalyptus globulus* and *E. camaldulensis*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), deodar cedar (*Cedrus deodara*), coast redwood (*Sequoia sempervirens*) and Monterey pine (*Pinus radiata*), among others. Most of the cover in this type was provided by introduced species that were planted at the perimeter of the site. Members of the shrub layer in this area include cotoneaster (*Cotoneaster pannosus*), oleander (*Nerium oleander*), mulberry (*Morus* sp.) and toyon (*Heteromeles arbutifolia*). These borders were not irrigated.

The man-made irrigation basin that previously served the golf course as a holding area for irrigation water was dry. The irrigation basin area did not have cattails (*Typha angustifolia*) and

bulrushes (*Schoenoplectus actutus*), and patches of umbrella sedge (*Cyperus eragrostis*) and creeping spikerush (*Eleocharis macrostachya*), which was present in the 2011 surveys. The aquatic habitat associated with the man-made irrigation basin feature was not present.

Responses to Checklist Questions

Response a): The project has the potential to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. This impact is less than significant with implementation of mitigation.

A total of 65 rare plants are listed as occurring within a nine-quadrangle area (Walnut Creek (center), Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo) surrounding the project site. For a complete list of special-status plants known from the vicinity of the site, please see Appendix A of the Biological Resources Report (Appendix C). It was determined that due to continuous site disturbance, first from agriculture and subsequently from golf course maintenance activities; as well as surrounding site disturbance by suburban development, it was extremely unlikely that any special-status plant would occur within or in the vicinity of the study area. No rare plants were detected during the 2011 surveys conducted for the Biological Resources Report. Since the 2011 surveys, the site has reverted to an annual grassland habitat. The areas that were previously golf turf, have colonized with common non-native annual plants. The property owner maintains the site through a weed abatement program that consists of grazing goats and mechanical mowing on an as-needed basis. The goats and mowing function to reduce vegetation levels to mitigate fire risks. The grazing and mowing activities inhibit the colonization of many plants that require infrequent disturbance. As rare plants are not present on the project site, the potential for the project to have a substantial adverse effect on a rare plant species is ***less than significant***.

Historical site disturbance made the presence of special-status animals on the project site extremely unlikely; however, the reversion of the site back to annual grasses increases the likelihood of special status animals to some extent. The reduced human activity increases the likelihood of nesting birds utilizing the trees. There are a few areas that have small colonies of ground squirrels, the burrows of which provide habitat for a variety of species (i.e. burrowing owls).

For the thirteen federal- or state-listed special-status animals considered for their potential to occur in the vicinity of the project site, please see Appendix B of the Biological Resources Report (Appendix C). Habitat affinities and reported distributions were analyzed to determine if there is potential for their occurrence within the study site. Twelve species were disqualified from further consideration because suitable habitat is not present for them at the project site.

The nearest CRLF occurrence is located 3.45 miles from the project site in Briones Regional Park, and the unnamed tributary of Grayson Creek south of the project site does not provide suitable habitat for this species. Mosaic biologists surveyed the man-made irrigation basin on June 14, and June 23, 2011. Pacific treefrogs were observed, but no California red-legged frogs of any life stage were observed on the project site, nor were any other special-status animals observed on the project site. Suitable habitat for one species, the California red-legged frog (*Rana draytonii*, CRLF) was present during the previous surveys, but it was determined that CRLF is extremely unlikely to occur on the project site, and was not detected during the two evening surveys of the irrigation basin and surrounding habitat. Since the previous surveys, the man-made irrigation basin has ceased to operate and has converted to an annual grassland. There is no aquatic habitat for CRLF on

the project site. For these reasons, modification of the project site from a vacant annual grassland area to a residential subdivision is not expected to have an adverse effect on CRLF.

The project site does provide suitable nesting and foraging habitat for a variety of birds, both special-status and non-special-status, but protected under the Migratory Bird Treaty Act (MBTA). The trees on the project site might provide nesting habitat for special-status birds, including Cooper's hawk (*Accipiter cooperii*) and white-tailed kite (*Elanus leucurus*). Shrubs and small trees on site also provide nesting habitat for a variety of birds protected under the MBTA, including western bluebird (*Sialia Mexicana*), American goldfinch (*Carduelis tristis*), oak titmouse (*Baeolophus inornatus*) and others.

The annual grassland, which has a small population of ground squirrels, provides foraging habitat for a variety of raptors and/or birds protected by the MBTA. The project would eliminate foraging habitat on the project site, with the exception of habitat remaining in Parcel B, and would require the removal of the majority of the trees on the project site (see Appendix A, Tree Removal and Demolition Plan). The project site is not considered a high quality foraging or nesting site given its limited size and surrounding residential uses. Modification of the project site from an annual grassland with some woodland areas, to a residential subdivision, would not have a significant adverse effects. However, construction activities that occur during the nesting season (generally March 1-August 31) would disturb nesting sites for birds protected by the MBTA and California Fish and Game Code. This is a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a **less than significant** level.

Mitigation Measure Bio-1: *If project construction activities, including vegetation clearing, are to occur during the nesting season for birds protected under the California Fish and Game Code and Migratory Bird Treaty Act (approximately March 1-August 31) the project applicant shall retain a qualified biologist to perform preconstruction surveys for protected birds, including nesting raptors and burrowing owls, on the project site and in the immediate vicinity. At least two surveys shall be conducted no more than 15 days prior to the initiation of construction activities, including vegetation clearing. In the event that protected birds, including nesting raptors, are found on the project site, offsite improvement corridors, or the immediate vicinity, the project applicant shall:*

- *Locate and map the location of the nest site. Within 2 working days of the surveys prepare a report and submit to the City and CDFW;*
- *A no-disturbance buffer of 250 feet shall be established;*
- *On-going weekly surveys shall be conducted to ensure that the no disturbance buffer is maintained. Construction can resume when a qualified biologist has confirmed that the birds have fledged.*

In the event of destruction of a nest with eggs, or if a juvenile or adult raptor should become stranded from the nest, injured or killed, the qualified biologist shall immediately notify the CDFW. The qualified biologist shall coordinate with the CDFW to have the injured raptor either transferred to a raptor recovery center or, in the case of mortality, transfer it to the CDFW within 48 hours of notification. If directed/authorized by the CDFW during the notification, the qualified biologist may transfer the injured raptors to a raptor recovery center.

The project site provides foraging habitat for bats, and the trees and structures on the project site could be used for roosting, although none were observed during field surveys. The proposed project would require permanent disturbance to the habitat. This is a potentially significant impact. Implementation of the following mitigation measure would reduce the impact to a **less than significant** level.

Mitigation Measure Bio-2: *A tree and building preconstruction survey for bat roosting habitat shall be conducted by a qualified biologist 15 days prior to commencing construction. Tree canopies and cavities and any structures slated for removal shall be examined for evidence of bat roosting. All bat surveys shall be conducted by a biologist with known experience surveying for bats. If no bats are found during the survey, structure demolition and tree removal work shall be conducted within one month of the survey.*

If a maternity colony is found during the surveys, the project proponent shall consult with CDFW. No eviction/exclusion shall be allowed during the maternity season (typically between April 15 and July 30), and impacts to this tree/structure shall be avoided until the young have reached independence. If a non-reproductive group of bats are found within a building or roost tree, the project proponent will consult with CDFW, and they shall be evicted by a qualified biologist and excluded from the roost site prior to work activities during the suitable time frame for bat eviction/exclusion (i.e., February 20 to April 14, and July 30 to October 15).

Response b): The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.

Riparian habitat is found in the interface between land and a river or stream. This habitat is significant in ecology, environmental management, and civil engineering because of their role in soil conservation, their habitat biodiversity, and the influence they have on fauna and aquatic ecosystems, including grassland, woodland, wetland or even non-vegetative.

Sensitive natural communities are those that are considered rare in the region, support special-status plant or wildlife species, or receive regulatory protection (i.e., §404 and 401 of the Clean Water Act, the CDFG §1600 et seq. of the California Fish and Game Code, and/or the Porter-Cologne Act). In addition, the California Natural Diversity Data Base (CNDDB) has designated a number of communities as rare; these communities are given the highest inventory priority (Holland 1986, CDFG 2003e). The project site does not have riparian habitat. The former golf course has converted to an annual grassland, which is not a sensitive natural community. The project site does not support any riparian habitat or sensitive natural communities. Implementation of the proposed project would result in **no impact** relative to this topic.

Response c): The project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Monk and Associates (M&A) conducted a formal delineation of waters of the U.S. (which includes wetlands) on the project site on September 24, 2013. M&A used the Corps' 1987 Wetlands Delineation Manual in conjunction with the regional supplement for the Arid West Region. There was a man-made irrigation basin in the center portion of the golf course; this feature has dried up. This feature is plastic lined, and was filled by groundwater well pumping and city water. The banks of this irrigation detention basin are reinforced with concrete, and the bottom is lined to prevent loss of water via lateral percolation. Two wells are present on the golf course property. Groundwater pumped from the wells to the irrigation basin supplied approximately 40% of the water used to irrigate the golf course, with the balance coming from the City of Martinez. The golf course maintenance crew cleared vegetation from the perimeter of the irrigation basin twice yearly to maintain open water for irrigation.

The man-made golf course irrigation basin was excavated in dry land as an ornamental feature for the golf course, and thus would not be regulated pursuant to Section 1600 et seq. of the Fish and Game Code. Water was provided to this irrigation basin through a piped irrigation system that otherwise supports the golf course. The irrigation basin was otherwise completely isolated within turf play areas and would be upland without artificial irrigation. In addition, the irrigation basin had no hydrologic connectivity to any tributary that would be regulated by the Department pursuant to Section 1600 et seq. of the Fish and Game Code. Subsequent to the delineation prepared in 2013, the irrigation basin ceased operations and has reverted to being dry. There is no aquatic vegetation or water present in the former irrigation basin.

Additionally, there are a series of vegetated swales on site that convey water to the municipal storm drain system. These occur along the northern and eastern boundaries of the site. A portion of it is perched against the fences and yards that abut the site. A short section of eroded ditch near the northeast corner of the site drained golf course runoff to the municipal storm drain system. A concrete V-ditch that conveys stormwater to a concrete culvert is located at the northwestern end of the project site and there are two extended drain inlets that are shaped to collect stormwater for delivery into the City storm drain system. These extended drain inlet basin areas do not support a bed or bank, and therefore are not subject to regulation pursuant to Section 1600 et seq. of the Fish and Game Code.

The man-made irrigation basin was considered to not be a jurisdictional wetland because its hydrology is entirely dependent on pumped groundwater and municipal sources. Since the irrigation basin ceased operation, there is no evidence of aquatic habitat or water. Additionally, the vegetated swales on site that convey water to the municipal storm drain system, and the concrete V-ditch that conveys water from the western hillside to the northwestern corner of the site were determined to not be jurisdictional because they were also man-made storm drainage features designed into the golf course to direct stormwater into the municipal storm drainage system. These areas are now annual grassland.

Development of the proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), Section 401 of the Clean Water Act, the Section 1600 et seq. of the California Fish and Game Code, and/or the Porter-Cologne Act, through direct removal, filling, hydrological interruption, or other means. Implementation of the proposed project would result in a ***less-than-significant*** impact relative to this topic.

Response d): The project would not 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.

The project site was formerly a golf course, and has converted to an annual grassland. The site does not serve as a wildlife corridor or nursery site. The project site does not connect to other open space. The proposed project would not 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. Implementation of the proposed project would result in a ***less-than-significant*** impact relative to this topic.

Response e): The potential for the project to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, is less than significant with mitigation.

General Plan Policies: The General Plan includes two policies related to the protection of biological resources within the Hidden Lakes Specific Area Plan as listed below:

- 32.34 Proposed development must be compatible with the Specific Area Plan with respect to natural terrain and vegetation, architectural and site design quality, adequacy of access and traffic impact.
- 32.341 Roads and buildings should be located in a manner which minimizes disturbance of the natural terrain and vegetation.

The project site does not contain high quality natural vegetation; rather it is in the early stage of colonization into an annual grassland from a maintained golf course. The project does not conflict with the above referenced policies. Ultimately, the City will make a policy consistency determination as they consider the project for approval or denial. Implementation of the project would have a ***less than significant*** impact relative to this topic.

Tree Protection Ordinance: The City of Martinez Tree Protection Ordinance regulates the removal of protected trees on private property (Chapter 8.12, Trees on Private Property – Preservation, Protection and Removal). The Ordinance defines protected trees as all oak trees and indigenous trees measuring 20 inches or larger in circumference (approximately 6.5 inches in diameter), measured 4 1/2 feet from ground level. Oak trees include but are not limited to: *Quercus agrifolia* (California or Coast Live Oak), *Quercus douglasii* (Blue Oak), *Quercus kelloggii* (California Black Oak) or *Quercus lobata* (Valley Oak). Indigenous trees include but are not limited to: *Sequoia sempervirens* (Coast Redwood), *Alnus Rhombifolia* (White Alder), *Alnus Oregona* (Red Alder), *Acer Macrophyllum* (Bigleaf Maple), *Aesculus Californica* (California Buckeye), *Arbutus Menziesii* (Madrone), *Umbellularia Californica* (California Bay or Laurel), *Juglans Hindsii* (California Black Walnut), *Platanus Racemosa* (California Sycamore), or *Sambucus Calliarpa* (Coast Red Elderberry).

A *Preliminary Arborist Evaluation* was prepared in October 2011 to evaluate the trees on the project site and to identify the trees that are protected under the City of Martinez Tree Protection Ordinance. The full report is contained in Appendix D. Trees were identified to species and measured four and one-half feet above grade in the field. They were tagged in the field using blue metal tags and located on a map. In 2016, the protected trees on the project site were re-evaluated in the *Pine Meadows Subdivision Arborist Memo* (Baefsky & Associates 2016).

Indigenous tree species identified were *Q. agrifolia* (coast live oak), *Q. douglasii* (blue oak), and *Q. lobata* (valley oak). These trees were probably planted by birds, and their irregular distribution on the course reflects the lack of discernible planting plan and localized soil conditions. Other CA native species that are not indigenous to the project site, but are protected include *S. sempervirens* (coast redwood), and *J. hindsii* (CA black walnut). The redwoods were planted as landscape amenities and the walnuts are remnant stump sprouts from a historic orchard planting.

The *Pine Meadows Subdivision Arborist Memo* evaluated 47 trees that are protected under the City of Martinez Tree Protection Ordinance were identified as to species and measured, mapped, tagged and evaluated for their conditions. Species included *Quercus agrifolia*, *Q. douglasii*, *Q. lobata*, *Sequoia sempervirens*, and *Juglans hindsii*. The largest tree measured 55.1 inches in diameter, the smallest 8.3 inches, and the average tree diameter measured 18.3 inches. Tree conditions identified in the *Pine Meadows Subdivision Arborist Memo* ranged from dead to good, with 11 dead, 3 very poor, 9 poor, 22 fair, and 2 good. On September 19, 2016, the project applicant received permission from the City to remove the 11 dead trees as well as two dying trees as the trees were determined to create a hazardous situation warranting their removal and requiring immediate action. Following

removal of the 13 dead and dying trees, the remaining trees on the project site include 34 protected trees. The project would retain five protected trees, resulting in the removal of a total of 29 protected trees.

As previously described, the proposed project would result in the loss of 29 trees protected under the Martinez Municipal Code Title 8 Health and Safety Chapter 8.12 Preservation of Trees on Private Property - Preservation, Protection and Removal; the remaining 5 protected trees would be preserved on the project site. The removal of the trees protected by Chapter 8.12 is a potentially significant impact. Section 8.12.020 of the Municipal Code requires a Permit prior to the removal of any protected tree. Under the Municipal Code, the Community Development Director or his/her designee shall grant or deny tree permits in accordance with Chapter 8.12. If a permit is granted, the Director may attach conditions to insure compliance with this Chapter. These conditions may include a requirement to replace any or all trees on a comparable ratio of either size or quantity. The following mitigation measure includes a condition to re-plant trees removed at a 3:1 ratio with indigenous species at a minimum of 24 inch box. The project has the potential to conflict with the City of Martinez Tree Protection Ordinance; however, the project applicant is requesting a tree removal permit as part of the application package. The City will make a determination for approval or denial with their consideration of the overall application package. Implementation of the following mitigation measure would ensure that the potential impact is reduced to a ***less than significant*** level.

Mitigation Measure Bio-3: *If tree removal is approved for the 29 trees on the project site that are protected under the Martinez Municipal Code (Title 8 Health and Safety Chapter 8.12 Preservation of Trees on Private Property - Preservation, Protection and Removal), the project applicant shall re-plant at a 3:1 ratio (87 trees) on the project site. The trees shall be indigenous tree species (i.e. Q. agrifolia (cost live oak), Q. douglasii (blue oak), and Q. lobata (valley oak)) and shall be 24 inch box at a minimum. The 87 trees shall be planted on the project site.*

Response f): 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.

The boundary of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP or Plan) is approximately 15 miles east of the City of Martinez. There are no other HCP/NCCPs applicable to the project site. Implementation of the proposed project would have ***no impact*** relative to this issue.

V. CULTURAL RESOURCES

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

Background

A *Determination of Eligibility and Effect for the Proposed Subdivision of the Vine Hill Property, Martinez* (Peak and Associates 2013) was prepared for the proposed project (Appendix E) under contract to De Novo Planning Group. The following is based on that study.

The study included a review of literature maintained by the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University. This indicated that the area had not been surveyed in the past and no resources were known in the immediate project vicinity.

The Native American Heritage Commission (NAHC) was contacted by Peak & Associates for a Sacred Lands review. Correspondence requesting information and/or comment and a topographic map showing the Project were sent to the Indian Canyon Mutsun Band of Costanoan (Ann Marie Sayers, Chairperson), the Ione Band of Miwok Indians (Yvonne Miller, Chairperson), the Trina Marine Ruano Family (Ramona Garibay, Representative) and The Ohlone Indian Tribe (Andrew A. Galvan). On October 5, 2017, the City sent a letter to the Ione Band of Miwok Indians, consistent with the requirements of Assembly Bill 52; to date, no comment has been received.

A field reconnaissance of the Area of Potential Effect (APE), defined by the property boundaries, was conducted on December 29, 2013 by Peak & Associates' Senior Archeologist Robert Gerry. No evidence of prehistoric occupation or use of this area was observed. Although the land is generally heavily disturbed due to development of the golf course, the periphery of the property is in relatively pristine condition and offered excellent ground visibility. The course itself was not in a verdant state at the time of the inspection, so surface visibility was still good.

The process of taking out the previously existing orchard on the property would have been tremendously destructive to any prehistoric properties in the APE. Additionally, the absence of a reliable surface water supply in the immediate area makes this an unlikely location for prehistoric settlement.

The only structures in the area are the clubhouse and associated sheds. All of these are modern and the clubhouse is a small one story frame structure of no architectural distinction.

Responses to Checklist Questions

Response a-b): The project's potential to substantially affect a historical resource or archaeological resource as defined in Section 15064.5 is less than significant with implementation of mitigation.

As a result of the identification and evaluation efforts, there are no historic properties or archaeological resources present. As with any surface inspection, there is some possibility that a buried site may exist in the area and be obscured by vegetation, fill, or other historic activities, leaving no surface evidence. Should artifacts or unusual amounts of stone, bone, or shell be uncovered during construction activities, an archeologist should be consulted for an evaluation. Implementation of the following mitigation measure would require investigations and avoidance methods in the event that a previously undiscovered cultural resource is encountered during construction activities. This mitigation measure would reduce this impact to a ***less than significant*** level.

***Mitigation Measure Cul-1:** If cultural resources (i.e., prehistoric sites, historic sites, isolated artifacts/features, and paleontological sites) are discovered work shall be halted immediately within 50 meters (165 feet) of the discovery, the City of Martinez shall be notified, and a qualified archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology (or a qualified paleontologist in the event paleontological resources are found) shall be retained to determine the significance of the discovery. The City of Martinez shall consider recommendations presented by the professional for any unanticipated discoveries and shall carry out the measures deemed feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. Specific measures are developed based on the significance of the find.*

Response c): The project's potential to substantially affect a unique paleontological resource or unique geologic feature is less than significant with implementation of mitigation.

The project site is located in an area that was previously developed as a golf course, which is generally considered to have less potential to encounter previously unknown paleontological resources relative to projects in undisturbed/undeveloped areas. There are no known unique geologic features on the project site. However, improvements and modifications within existing developed area still have the potential to damage or destroy undiscovered paleontological resources especially during deeper excavations.

Implementation of Mitigation Measure Cul-1 above would require investigations and avoidance methods in the event that a previously undiscovered paleontological resource is encountered during construction activities. This mitigation measure would reduce this impact to a ***less than significant*** level.

Response d): The project's potential to disturb human remains is less than significant with implementation of mitigation.

Indications are that humans have occupied Contra Costa County for at least 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials. Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Additionally, Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during

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

Mitigation Measure Cul-2: *If any human remains are found during grading and construction activities, all work shall be halted immediately within 50 meters (165 feet) of the discovery and the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed. Additionally, if the Native American resources are identified, a Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, may also be required and, if required, shall be retained at the applicant's expense.*

VI. GEOLOGY AND SOILS

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?		X		
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

Background

A *Geotechnical Feasibility Investigation and Supplemental Grading Recommendations* (Stevens, Ferrone & Bailey Engineering Company, Inc. 2011) was prepared for the proposed project. The full reports are contained in Appendix F and G. The following responses are based on those studies.

Responses to Checklist Questions

Response a.i-iii): The project would not result in a significant impact associated exposure of people or structures to potential substantial adverse effects associated with rupture of a known earthquake fault, strong seismic ground-shaking, or seismic-related ground failure.

The project site is located in the seismically active San Francisco Bay Area. Moderate to severe earthquakes on any of the numerous faults in the area could impact the project site. Of particular concern is the Concord/Green Valley Fault, which is located approximately 1.5 miles east of the project site. The active Concord/Green Valley Fault is capable of producing an earthquake with a

moment magnitude (M_w) of about 6.9. The project site is located outside the Alquist-Priolo earthquake fault zone and surface rupture from known active faults is not anticipated.

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesionless soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. Soil data from the NRCS Web Soil Survey indicates that the project site soils have bedrock within 12 inches of the surface and the upper soil is approximately 31 percent clay, 35.4 percent sand, 33.6 percent silt. This soil composition is not considered to be a high risk of liquefaction. Additionally, liquefaction is less likely in areas with shallow bedrock. According to ABAG and the U.S. Geological Survey, the project site is located in an area mapped as having a very low likelihood of liquefaction in an earthquake and has been characterized as having very low liquefaction susceptibility. The liquefaction potential of the project site and surrounding area has not been evaluated by the State of California.

There will always be a potential for groundshaking caused by seismic activity anywhere in California, including the project site. Seismic activity could come from a known active fault such as the Concord/Green Valley Fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. The California Building Code, Title 24, Part 2, Chapter 16 addresses structural design and Chapter 18 addresses soils and foundations. Collectively, these state requirements, which have been adopted by the City of Martinez, include design standards and requirements that are intended to minimize impacts to structures in seismically active areas of California. Section 1613 specifically provides structural design standards for earthquake loads. Section 1803.5.11 and 1803.5.12 provide requirements for geotechnical investigations for structures assigned varying Seismic Design Categories in accordance with Section 1613. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level. Because development of the proposed project must be designed in conformance with these state and local standards and policies, any potential impact would be *less than significant*.

Response a.iv): The project's potential to result in exposure of people or structures to potential substantial adverse effects associated with landslides is less than significant with mitigation.

There are several categories of landslides including: rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill).

According to U.S. Geological Survey Open-File Report 97-745 (landslide folio of the San Francisco Bay Area), the project site is not mapped as having previously identified landslides or earthflows nor is it located within an area having debris flow source potential. Based on the results of the geotechnical reconnaissance and review of documents, Stevens, Ferrone & Bailey Engineering Company, Inc. (2011) did not observe evidence of adverse slope stability, erosion, or drainage conditions at the site. Additionally, they did not observe evidence of active, deep seated slope movement onsite or in the vicinity of the project site.

The project site is rolling with gentle slopes. The grading plan would require approximately 107,000 cubic yards of cut and 103,000 cubic yards of fill. The end result will be a net export of 4,000 cubic yards. The topography of the developed subdivision will be more flat than the existing

condition; however, some slope will remain. The potential for landslides is considered minimal after the grading and compaction of soils to a specified geotechnical standard. Mitigation Measure Geo-1 requires a geotechnical evaluation and design for the proposed project prior to approval of a grading permit. Implementation of the following mitigation measure would reduce the impact to a **less-than-significant** level.

Mitigation Measure Geo-1: *The project proponent shall incorporate the recommendations from the Geotechnical Feasibility Investigation and Supplemental Grading Recommendations into project plans and specifications. In addition, prior to earthmoving activities, a certified geotechnical engineer shall be retained to perform a geotechnical evaluation of the soils at a design-level as required by the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 related to expansive soils and other soil conditions. The evaluation shall be prepared in accordance with the standards and requirements outlined in California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. The grading and building plans shall be designed in accordance with the recommendations provided in the geotechnical evaluation.*

Response b): The potential for the project to result in substantial soil erosion or the loss of topsoil is less than significant with implementation of mitigation.

The proposed project involves construction on a former golf course that has rolling slopes. Soil data from the NRCS Web Soil Survey indicates that the project site soils have an Erosion Factor K of 0.24. Factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values range from 0.02 to 0.69 and the higher the value, the more susceptible the soil is to sheet and rill erosion by water. The 0.24 value for the project site is considered low to moderate.

The project site is a former golf course that is not at significant risk of erosion under the existing conditions. Construction activities including grading could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of a substantial amount of nonrenewable topsoil and could adversely affect water quality in nearby surface waters; this is a potentially significant impact. The RWQCB requires a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area one acre or larger. The SWPPP will include project specific best management measures that are designed to control drainage and erosion. Furthermore, proposed project will include detailed project specific drainage plan that control storm water runoff and erosion, both during and after construction. The SWPPP and the project specific drainage plan would reduce the potential for erosion. Implementation of the following mitigation measure would ensure that the proposed project would result in a **less-than-significant** impact relative to this topic.

Mitigation Measure Geo-2: *The Project Applicant shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the City of Martinez and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.*

Response c): The project is 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; this impact is reduced to less than significant with implementation of mitigation.

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. Soil data from the NRCS Web Soil Survey indicates that the project site soils have bedrock within 12 inches of the surface and the upper soil is approximately 31 percent clay, 35.4 percent sand, 33.6 percent silt. This soil composition is not considered to be a high risk of liquefaction. Additionally, liquefaction is less likely in areas with shallow bedrock. According to ABAG and the U.S. Geological Survey, the project site is located in an area mapped as having a very low likelihood of liquefaction in an earthquake and has been characterized as having very low liquefaction susceptibility. Implementation of proposed project would have a *less than significant* impact relative to liquefaction.

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is also directly associated with areas of liquefaction. The project site is rolling with gentle slopes. The grading plan would require approximately 107,000 cubic yards of cut and 103,000 cubic yards of fill. The end result will be a net export of 4,000 cubic yards. The topography of the developed subdivision will be more flat than the existing condition; however, some areas with moderate and steep slopes will remain. The potential for lateral spreading could exist in the open space buffer areas where there are slopes. If near-surface soils vary in composition both vertically and laterally, strong earthquake shaking can cause non-uniform compaction of the soil strata, resulting in movement of the near-surface soils. Overall the potential for lateral spreading or collapse is considered minimal after the grading and compaction of soils to a specified geotechnical standard. Mitigation Measure Geo-1 provides the requirement for a geotechnical evaluation in accordance with the standards and requirements outlined in the California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The geotechnical evaluation includes design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. The grading and building plans are required to be designed in accordance with the recommendations provided in the geotechnical evaluation. The City Engineer reviews the geotechnical evaluation with the improvement plan and grading plan submittal to ensure that the geotechnical recommendations have been incorporated into the final plans. Implementation of Mitigation Measure Geo-1 (presented under Response a-iv above) would ensure that the proposed project would have a *less than significant* impact relative to lateral spreading and collapse.

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. Soil data from the NRCS Web Soil Survey indicates that the project site soils have bedrock within 12 inches of the surface. Land subsidence is highly unlikely in areas with shallow bedrock. Implementation of proposed project would have a *less than significant* impact relative to this topic.

Response d): The project is located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) and implementation of mitigation would address potential risks to life or property.

Expansive soils are those that shrink or swell with the change in moisture content. The volume of change is influenced by the quantity of moisture, by the kind and amount of clay in the soil, and by the original porosity of the soil. Shrinking and swelling can damage roads and other structures unless special engineering design is incorporated into the project plans.

Linear extensibility is a soil property that is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

The California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 requires specific geotechnical evaluation when it is determined that expansive or other special soil conditions are present, which, if not corrected, would lead to structural defects. The soils on the project site are LcE—Lodo Clay Loam, 9 to 30 percent slopes. The linear extensibility on these soils is 4.5, which represents a moderate shrink-swell potential on the project site. Development of the proposed project would be subject to expansive soils; this is a potentially significant impact. The project would require specific geotechnical evaluation and foundation design as a result.

Mitigation Measure Geo-1, presented above, provides the requirement for a geotechnical evaluation in accordance with the standards and requirements outlined in the California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The geotechnical evaluation would include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. The grading and building plans are required to be designed in accordance with the recommendations provided in the geotechnical evaluation. Implementation of Mitigation Measure Geo-1 would ensure that the proposed project would have a *less than significant* impact relative to this topic.

Response e): The project would have not impact associated with soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

The proposed project would not require the use of septic tanks or alternative waste water disposal systems for the disposal of waste water. Implementation of the proposed project would result in *no impact* relative to this topic.

VII. GREENHOUSE GAS EMISSIONS

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

Responses to Checklist Questions

Response a): The project's potential to generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment is less than significant.

GHG emissions generated by operation and construction of the proposed project would consist primarily of CO₂ emissions, with very limited quantities of methane (CH₄) also generated. Carbon dioxide equivalents (CO₂e) provide a universal standard of measurement against which the impacts of releasing (or avoiding the release of) different greenhouse gases can be evaluated.

Operational Greenhouse Gas Emissions: The California Emission Estimator Model (CalEEMod)TM (v.2016.3.2) was used to estimate operational and construction GHG emissions for the proposed project. The CalEEMod emissions output is provided in Appendix B. Table 6 shows the CO₂e emissions, which include mobile source, area source, waste, water, and energy emissions that result from existing conditions on the project site and the CO₂e emissions that would result from operations of proposed project.

BAAQMD's adopted threshold of significance for operational GHG emissions is 1,100 metric tons of CO₂e per year. Existing conditions on the project site, including operation of the restaurant, storage area, and site maintenance, result in approximately 873.32 metric tons of CO₂e per year. As shown in Table 6, proposed project operations would result in unmitigated operational GHG emissions (Scenario 1) of 1,338.07 metric tons per year of CO₂e per year and mitigated emissions (Scenario 3) of 1,269.27 metric tons of CO₂e per year. The net increase in emissions associated with project implementation (net emissions equals mitigated proposed project emissions less existing project conditions emissions) would be 395.95 metric tons of CO₂e per year, which is less than the BAAQMD threshold of 1,100 metric tons of CO₂e per year. The project would not generate operational greenhouse gas emissions that exceed the BAAQMD threshold of significance and thus would not have a considerable contribution to cumulative greenhouse gas impacts; this impact is *less than significant*.

Table 6: Operational Annual GHG Emissions Analysis

<i>SCENARIO</i>		<i>GHG EMISSIONS (METRIC TONS OF CO₂E)</i>
1	Existing Project Conditions	873.32
2	Unmitigated Proposed Project	1,338.07
Unmitigated Net Emissions (Unmitigated Proposed Project minus Existing Project Conditions)		464.75
3	Mitigated Proposed Project	1,269.27
Mitigated Net Emissions (Unmitigated Proposed Project minus Existing Project Conditions)		395.95

SOURCES: CALEEMOD (v.2016.3.2)

Construction Greenhouse Gas Emissions: Table 7 shows the total CO₂e emissions that would result from project construction activities. BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions and encourages lead agencies to incorporate best management practices during construction. The project would incorporate best management practices for construction activities as identified by mitigation measure Air-2. It is noted that the construction-related CO₂e emissions do not exceed the BAAQMD operational threshold of significance in any year. With implementation of mitigation measure Air-2 and emissions that are below the operational threshold, it is anticipated that this impact would be ***less than significant*** and that the project construction activities would not result in a significant contribution to cumulative greenhouse gas emissions.

Table 7: Construction GHG Emissions

	CO₂E
EMISSIONS – METRIC TONS PER YEAR (UNMITIGATED)	
Year 1	457.9661
Year 2	373.9327
Year 3	276.1601
EMISSIONS – METRIC TONS PER YEAR (MITIGATED)	
Year 1	457.9656
Year 2	373.9324
Year 3	276.1599

SOURCES: CAL EEMOD (v.2016.3.2)

Response b) The project's potential to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases is less than significant with implementation of mitigation.

The *City of Martinez Climate Action Plan* (CAP) establishes strategies to reduce the greenhouse gas emissions known to contribute to climate change, to conserve energy and other natural resources, and to prepare the community for the expected effects of global warming. The CAP includes specific goals and objectives to reduce greenhouse gas emissions, including policies, programs, and actions that facilitate the efforts of residents and businesses to reduce their own greenhouse gas emissions.

The CAP has the following three primary goals:

1. To reduce GHG emissions from sources within the City of Martinez;
2. To shift to renewable energy sources;
3. To prepare for a changing climate.

The following CAP policies provide more specific intent and guidelines:

1. Strategies for reducing GHGs and for adapting to climate change should build on actions already completed or in progress. The CAP should focus on low-cost, simple, and comprehensive strategies.
2. Through the planning process, and also through implementation of strategies specified in the CAP, the City should increase awareness of climate change among Martinez residents

and businesses, and facilitate individual actions to reduce GHG emissions and prepare for the effects of climate change.

3. The City should establish an institutional structure (including General Plan policies, ordinances, City government structure and staffing) to enable implementation of CAP programs.
4. The City should cooperate with state agencies and other local governments to broaden greenhouse gas reduction and adaptation programs, and to make them more effective.
5. The City should encourage and facilitate a shift from reliance on fossil fuels to renewable energy sources, including development of local renewable energy generation capacity.

The following principles are intended to ensure that the CAP policies and programs reflect community interests and has the best chance of achieving the CAP's goals. The guiding principles provide a foundation for the evaluation and selection of strategies, and will facilitate a balanced approach to the CAP.

1. Sustainable function follows sustainable form.
2. Look for opportunities of greatest leverage.
3. Invest incrementally in new technologies.
4. Change behavior through education and example.
5. Choose strategies that build broad, long-term self-sufficiency.
6. Reduce, reuse, and recycle.
7. Evaluate strategies against realistic benefits and drawbacks.
8. Consider that every solution can potentially create new problems.
9. Take personal, business, and governmental responsibility for green living.
10. Look to Nature for Solutions.

These principles will be used to guide development of CAP strategies, specifically for moving from the conceptual strategies for GHG reduction, to more specific strategies.

Additionally, the CAP establishes priorities in four key GHG emissions categories for adapting to the local physical changes in the environment that are already being felt as a result of global climate change, and that are expected to intensify in the coming years. Below is a list of the four key GHG emission categories addressed in the CAP.

1. Transportation - The largest contributing factor in Martinez's GHG emissions, related to the use of GHG emitting motor vehicles.
2. Energy - The consumption and waste of electric energy from power plants and natural gas from fossil sources of methane.

3. Solid Waste - Transporting and disposing of GHG emitting solid waste including organic wastes deposited in landfill, and energy and associated greenhouse gas emissions embodied in products that we purchase, use, and discard.
4. Water - Not included in the Inventory, but part of the Strategic Targets.

As described in Appendix L (*Transportation Impact Analysis*), the project proposes the following trip reduction measures to reduce vehicle-related greenhouse gas emissions.

- Proximity to Bike Paths/Bike Lanes–The project design includes a network of bike paths and lanes that connects the project uses to the existing offsite facilities. The site plan and tentative subdivision map for the project include frontage improvements along Newell Drive to facilitate ease of access to the existing bicycle network.
- Provide Pedestrian Network Improvements - The project will provide a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site. The project will minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, landscaping, and slopes that impede pedestrian circulation will be minimized. The site plan and tentative subdivision map for the project include sidewalks throughout the internal project site and that connect to adjacent facilities.
- Internal Ride-Share Matching Services – The project proposes to deliver a ride-share education and awareness packet for all new tenants, including information on ride-share resources, such as carpoolworld.com serving the area and region, to encourage the use of trip reducing tools.
- Telecommuting Education and Awareness – The project proposes to deliver a telecommuting education, awareness and equipment requirements packet for all new tenants. This will provide tenants with telecommuting resources, such as information on collaboration software services like GoToMeeting and Skype which encourage the use of trip reducing technologies.

The project does not conflict with the City's CAP goals, principles, and strategies for reducing the City's GHG emissions and includes GHG/vehicle trip reduction measures to ensure that the project contributes to the City's greenhouse gas reduction efforts. Implementation of the proposed project would not hinder the City's ability to fully implement the CAP, nor would it interfere with the City's achievement of the GHG emissions reductions that are projected with full implementation of the CAP. Implementation of the City's CAP would assist the City in meeting the GHG emissions reduction established by AB 32. Implementation of the proposed bike and pedestrian measures are demonstrated by the project's site plan and tentative subdivision map. Mitigation measure GHG-1 would ensure the project's consistency with the City's CAP and are required by mitigation measure GHG-1 below.

Mitigation Measure GHG-1: *The project shall implement the following vehicle trip reduction measures:*

- ***Internal Ride-Share Matching Services*** – *The project will display information regarding ride-share services at the new home sales center during the sales phase of the project. As part of the home purchase documents, each homebuyer will be provided a ride-share education and awareness packet, including information on specific ride-share resources and programs serving the region.*
- ***Telecommuting Education and Awareness*** – *This project will display information regarding telecommuting at the new homes sales center during the sales phase of the project. As part of the*

home purchase documents, each homebuyer will be provided with a telecommuting education, awareness, and equipment resources packet, including information on local and regional telecommuting resources as well as information on collaboration software and services.

Implementation of mitigation measure GHG-1 would assist the City in meeting the GHG emissions reduction established by the CAP and by AB 32. In addition to the proposed project's consistency with the CAP, the proposed project would be subject to the California Green Building Standards Code referred to as CALGreen. CALGreen would help reduce GHG emissions, and would further ensure that the proposed project would be consistent with all applicable plans and policies adopted for the purpose of reducing GHG emissions. Therefore, implementation of the proposed project with adherence to mitigation measure GHG-1 would have a ***less than significant*** impact relative to the potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

VIII. HAZARDS AND HAZARDOUS MATERIALS

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

Background

Phase I Environmental Site Assessment: A Phase I Environmental Site Assessment (ESA) was prepared in 2011 by AEI Consultants (AEI) in general conformance with the scope and limitations of ASTM Standard Practice E1527-05 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the property located at 451 Vine Hill Way in the City of Martinez, Contra County, California. The following is a summary of the report, which is contained in Appendix H.

Recognized Environmental Conditions (RECs) are defined by the ASTM Standard Practice E1527-05 as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a

release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. AEI's assessment has revealed the following RECs associated with the subject property or nearby properties:

- The subject property was used as a golf course since 1970 and agricultural land/orchard since at least 1939. The nature of use at the subject property involves the application, storage, and mixing of pesticides and herbicides at the subject property. A weed and feed storage shed was located adjacent to the maintenance building. The weed and feed storage shed was locked during AEI's site reconnaissance. The chemicals were reportedly utilized to service the golf greens/fairways located on the subject property. Based on the duration of use as a golf course and the tendency of these constituents to remain in near surface soils, the application and storage of pesticides and herbicides at the subject property may have impacted the subject property. Soil sampling would be recommended prior to any redevelopment of the subject property to determine whether the application of pesticides and herbicides has adversely impacted the subject property.

Business Environmental Risks (BERs) include risks which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of the subject property, not necessarily limited to those environmental issues required to be investigated in the standard ASTM scope. BERs may affect the liabilities and financial obligations of the property owner, the health & safety of site occupants, and the value and marketability of the subject property. AEI's assessment has revealed the following BERs associated with the subject property or nearby properties:

- Due to the age of the subject property building, there is a potential that asbestos-containing materials (ACMs) are present. All suspect ACMs were observed in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. In the event that building renovation or demolition activities are planned, an asbestos survey adhering to the Asbestos Hazard Emergency Response Act (AHERA) sampling protocol should be performed prior to demolition or renovation activities that may disturb suspect ACMs.
- Due to the age of the subject property building, there is a potential that lead-based paint (LBP) is present. All observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Local regulations may apply to LBP in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the Occupational Safety and Health Administration (OSHA) lead standard contained in 29 CFR 1910.1025 and 1926.62.

AEI's assessment did not reveal any Historical Recognized Environmental Conditions (HRECs) as defined by the ASTM Standard Practice E1527-05 or De Minimis Environmental Conditions as defined by the ASTM Standard Practice E1528-05.

AEI's assessment revealed no evidence of RECs in connection with the property other than the potential for ACMs and LBP as previously identified above. While no REC was identified associated with past use of pesticides and herbicides, AEI recommended a Phase II subsurface investigation to

determine whether the application of pesticides and herbicides has adversely impacted the subject property.

Phase II Soil Investigation: At the recommendation of the Phase I ESA, a Phase II Soils Investigation was prepared by AEI Consultants (AEI). The following is a summary of the report, which is contained in Appendix I.

The investigation included the collection and analyses of shallow soil samples from twenty-nine (29) locations throughout the property. AEI was requested to assess whether shallow soils of the property had been impacted by onsite storage of petroleum hydrocarbons and the historical applications of pesticides associated with prior agricultural / orchard use of the land and of the golf course since the early 1970s.

Relatively low, trace concentrations of the pesticides DDT, dieldrin, and endosulfan II were detected in the composite samples from the golf course and putting green areas. Aldrin was detected at a low concentration in a sampling location advanced immediately adjacent to the pesticide and fertilizer shed. Low concentrations of a-chlordane and g-chlordane were detected in the sludge sample collected from the pond. No other pesticides were detected exceeding laboratory reporting limits in the composite or discrete samples analyzed. Herbicides were not detected in the two sampling locations adjacent to the pesticide and fertilizer shed. Arsenic, total chromium, and lead were detected in the samples analyzed at concentrations representative of naturally-occurring background conditions. However, significant concentrations of heavy-range petroleum hydrocarbons were detected in shallow soil adjacent to the petroleum hydrocarbon storage shed.

For comparison, sample analytical data was compared to the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs²) and Cal-EPA Human Health Screening Levels (CHHSLs³) in Table 1 of the Soils Investigation (Appendix I). The ESLs selected for comparison were the default residential ESL and CHHSL screening values, as well as the ESL value for residential land use considering a direct exposure pathway. Residential ESLs are primarily calculated assuming 30-year residential exposure via incidental ingestion, dermal contact, and inhalation of airborne chemical constituents from affective soil media. The ESL direct exposure value presented in Table 1 of the Soils Investigation (Appendix I) considers residential and construction worker exposure scenarios and is the lowest direct exposure value (target carcinogenic risk of 1×10^{-6} and a hazard quotient of 0.2). None of the pesticide detections in the composite/discrete soil samples or sludge within the irrigation basin exceed applicable ESLs or the CHHSLs. Motor oil detected in the borings adjacent to the petroleum hydrocarbon storage shed exceeds both the default and direct exposure ESLs. Diesel detected in one sample adjacent to the petroleum hydrocarbon storage shed, AEI-22-0.5', exceeds both the default and direct exposure ESLs. Although arsenic exceeds the default ESLs and CHHSLs, based on AEI's experience, the observed detections are consistent with naturally occurring background concentrations commonly observed in the Bay Area and not indicative of an anthropogenic source.

Based on the findings of the investigation, no indication of a significant release of pesticides, herbicides, or metals was identified on the property. No further investigation relating to the current or previous use or storage of pesticides and herbicides on the property is recommended at this time. However, sample analytical results indicate that a release of diesel and oil range petroleum hydrocarbons occurred in the area of the petroleum product storage shed. AEI recommends mitigation of the petroleum impacted soil prior to development. It is expected that mechanical excavation and disposal of impacted soil in the area of the storage shed following its dismantling would be a viable, cost-effective approach to mitigate the release prior to redevelopment. Based on the low mobility of oil in soil, it is expected that impact does not extend beyond a depth of 3 to 4

feet bgs in this area. Confirmation soil samples following excavation would be needed to confirm that the release has been effectively removed.

Responses to Checklist Questions

Response a): The potential for the project to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials is less than significant with implementation of mitigation.

Operation of the proposed project would not result in the routine transport, use, or disposal of hazardous materials. Some hazardous materials may be used during construction. This includes fuels and petroleum products, which are anticipated to be in such small quantities that it would pose no significant hazard or risk to the public or the environment. The use, clean up, and disposal of potentially hazardous construction materials is managed according to standard procedures to protect air quality, water quality, and the environment. Implementation the below mitigation measure is provided to ensure that the proposed project would result in a ***less than significant*** impact relative to this topic.

Mitigation Measure Haz-1: All construction activities must have designated staging/maintenance areas, standard operating procedures, and emergency response planning. To minimize the potential for accidental spills from equipment and to provide for a planned response in the event that an accidental spill does occur, the project proponent shall implement the following construction best management practices:

- Designate a restricted area for on-site fueling of vehicles and construction equipment, and for handling and storage of hazardous materials;
- The restricted area must be equipped with a spill containment basin;
- Maintain spill cleanup equipment onsite; and,
- Ensure that construction personnel are trained in proper material handling, cleanup, and disposal procedures.

Response b): The potential for the project to 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 is less than significant with implementation of mitigation.

Operation of the proposed project would not result in a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Some hazardous materials may be used during construction and demolition and grading activities would disturb petroleum-containing soils and potential ACMs and LBP. Hazardous materials used during construction include fuels and petroleum products, which are anticipated to be in such small quantities that they would pose no significant hazard or risk to the public or the environment. The use, clean up, and disposal of potentially hazardous construction materials will be managed according to standard procedures to protect air quality, water quality, and the environment as per state laws and is not expected to result in a reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

The Phase I ESA identified the need to perform a Phase II Soil Investigation to determine whether the application of pesticides and herbicides has adversely impacted the project site. A Phase II Soils Investigation was subsequently prepared. Based on the findings of the investigation, no indication of a significant release of pesticides, herbicides, or metals was identified on the project site. No further investigation relating to the current or previous use or storage of pesticides and herbicides on the project site was recommended. The findings indicated that there was a release of diesel and oil range petroleum hydrocarbons that occurred in the area of the petroleum product storage shed;

the potential exposure to these materials is a potentially significant impact. The soils investigation indicated that mechanical excavation and disposal of impacted soil in the area of the storage shed following its dismantling would be a viable, cost-effective approach to mitigate the release prior to development. Based on the low mobility of oil in soil, it is expected that impact does not extend beyond a depth of 3 to 4 feet bgs in this area. Confirmation soil samples following excavation would be needed to confirm that the release has been effectively removed.

The Phase I ESA indicated that due to the age of the buildings on the project site, there is a potential for ACMs and LBP to be present. The potential to disturb ACMs and LBP during demolition activities is a potentially significant impact. The Phase I recommended that an asbestos survey adhering to the AHERA sampling protocol be performed prior to demolition or renovation activities that may disturb suspect ACMs and that material sampling or XRF survey be performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.

The proposed project has the potential to result in a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, including ACMs, LBP, and/or diesel and oil range petroleum hydrocarbons that were released in the area of the petroleum product storage shed. This is a potentially significant impact. Implementation of the following mitigation measures would reduce this impact to a **less than significant** level.

Mitigation Measure Haz-2: *All demolition activities shall be performed in accordance with the Bay Area Air Quality Management District Regulation 11 Hazardous Pollutants, Rule 2 Asbestos Demolition, Renovation, and Manufacturing. The purpose of this Rule is to control emissions of asbestos to the atmosphere during demolition, renovation, milling and manufacturing and establish appropriate waste disposal procedures. These requirements specify the appropriate methods for survey, demolition/removal, and disposal of asbestos materials to control emissions and prevent hazardous conditions. Specifications developed for the demolition activities shall be in accordance with BAAQMD rules and regulations, and shall include the proper packaging, manifesting, and transport of demolition wastes by trained workers to a permitted facility for disposal, in accordance with local, State, and federal requirements. Prior to the issuance of permits for demolition activities, the project applicant shall demonstrate to the City Economic and Community Development Department whether asbestos-containing materials are present on the project site. If asbestos-containing materials are present, the project applicant shall demonstrate compliance with BAAQMD requirements related to asbestos-containing materials to the City Economic and Community Development Department prior to the issuance of permits for demolition activities.*

Mitigation Measure Haz-3: *Prior to demolition or renovation activities that may disturb suspect lead-based paint (LBP), actual material samples shall be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead are subject to certain requirements of the Occupational Safety and Health Administration (OSHA) lead standard contained in 29 CFR 1910.1025 and 1926.62. If lead-based paint is identified, the paint shall be removed by a qualified lead abatement contractor. Specifications developed for the demolition activities shall include the proper packaging, manifesting, and transport of demolition wastes by trained workers to a permitted facility for disposal, in accordance with local, State, and federal requirements. Prior to the issuance of permits for demolition activities, the project applicant shall demonstrate to the City Economic and Community Development Department whether lead-based paint is present on the project site. If lead-based paint is present, the project applicant shall demonstrate compliance with state and federal requirements related to the disturbance and removal of lead based paint to the City Economic and Community Development Department prior to the issuance of permits for demolition activities.*

Mitigation Measure Haz-4: Prior to grading, mechanical excavation and disposal of the diesel and oil range petroleum hydrocarbons release (area of the petroleum product storage shed) shall be completed by a qualified contractor. Specifications shall be developed by a qualified professional for the excavation and disposal activities and shall address the proper packaging, manifesting, and transport of demolition wastes by trained workers to a permitted facility for disposal, in accordance with local, State, and federal requirements. Confirmation soil samples following excavation shall be performed to confirm that the release has been effectively removed. Construction specifications shall be submitted to the City Economic and Community Development Department prior to the issuance of permits for demolition activities.

Response c): The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

The project site is outside a ¼ mile radius of the nearest school. The closest school is Hidden Valley Elementary School located approximately .5 miles to the east of the project site. Implementation of the proposed project would result in a **less than significant** impact associated with the potential for hazardous emissions or handling hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Response d): The project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and therefore would not, as a result, create a significant hazard to the public or the environment.

The Phase I ESA, which included a review of a list of hazardous materials sites compiled by the State of California pursuant to Government Code Section 65962.5, indicates no recorded documentation of hazardous materials violations or discharge on the property has been recorded. In 2018, the project site was not identified as a hazardous material site based on a review of the State Department of Toxic Substances Control Hazardous Waste and Substances Site List (http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm), the GeoTracker database (<https://geotracker.waterboards.ca.gov/>), the solid waste hazardous sites list (<https://calepa.ca.gov/wp-content/uploads/sites/62/2016/10/SiteCleanup-CorteseList-CurrentList.pdf>), the Cease and Desist Orders and Cleanup and Abatement Orders list (<https://calepa.ca.gov/wp-content/uploads/sites/62/2016/10/SiteCleanup-CorteseList-CDOCAOList.xlsx>), and the list of hazardous waste facilities subject to corrective action (<https://calepa.ca.gov/site-cleanup/cortese-list-data-resources/section-65962-5a/>).

This impact is **less than significant**.

Response e): The project would not result in a safety hazard associated with a public airport or public use airport.

The proposed project is located approximately two miles west of Buchanan Field in the City of Concord. The proposed project is not located within the runway protection zones of the airport and does not propose any buildings with heights that would penetrate the conical surface area illustrated in the Airport Airspace Plan (Buchanan Field Airport Master Planning Program, 2008). Thus, the proposed project would not create an aircraft safety hazard for people residing or working in the project area. Implementation of the proposed project would result in a **less than significant impact** relative to this topic.

Response f): The project would not result in a safety hazard associated with a private airstrip.

The proposed project is not located in the vicinity of a private airstrip. Thus, proposed project would not create an aircraft safety hazard for people residing or working in the project area. Implementation of the proposed project would result in ***no impact*** relative to this topic.

Response g): The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The project site is served by an existing network of City streets. The proposed project would be located in areas currently occupied by a golf course and would provide for access to the project site via Morello Avenue, Center Avenue, and Vine Hill Way as shown on Figure 3; project roadway improvements would be constructed to meet City standards and requirements. The proposed internal circulation is adequate for emergency personnel to access. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Implementation of proposed project would have ***less than significant*** impact relative to this topic.

Response h): The project would not 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.

The project site is within an urbanized area and is not adjacent to significantly large areas subject to wildland fires. Implementation of the proposed project would result in ***no impact*** relative to this topic.

IX. HYDROLOGY AND WATER QUALITY

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

Responses to Checklist Questions

Response a): The potential for implementation of proposed project to violate any water quality or waste discharge requirements is less than significant with implementation of mitigation.

Construction activities including grading could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of soil and

could adversely affect water quality in nearby surface waters which could result in violation of water quality standards. However, the RWQCB requires a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area one acre or larger. The SWPPP is required to include project specific best management measures that are designed to control drainage and erosion. Mitigation Measure Geo-2 would require the preparation of a SWPPP to ensure that the proposed project prepares and implements a SWPPP throughout the construction phase of the project. Furthermore, the proposed project includes a preliminary grading and drainage plan that has a specific drainage plan designed to control storm water runoff and erosion, both during and after construction. The SWPPP (Mitigation Measure Geo-2) would reduce the potential for the proposed project to violate water quality standards during construction. Implementation of the Mitigation Measure Geo-2 would ensure that proposed project would result in a *less-than-significant* impact relative to this topic.

Response b): The project would not 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.

The proposed project would connect to the City of Martinez Water System, which provides water from the City's water treatment plant. The project site is not located in an area that is a significant recharge area for the aquifer. The proposed project would not 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). Implementation of the proposed project would have a *less-than-significant* impact relative to this environmental topic.

Response c-e): The project's potential to alter the existing drainage pattern of the project site and cause erosion, siltation, or flooding, to create or contribute runoff water which would exceed the capacity of the storm drainage system, or provide substantial additional sources of polluted runoff is less than significant.

Development of the proposed project would increase impervious surfaces throughout the project site and would alter the topography and drainage patterns of the project site. The proposed project would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the project site. The proposed storm drainage plan (Appendix J) includes an engineered network of storm drain lines, manholes, inlets, catch basins, and bio-retention areas. The storm drainage plan was designed to generally maintain the drainage patterns on the site and was designed and engineered to ensure proper construction of storm drainage infrastructure to control runoff and prevent flooding, erosion, and sedimentation. The on-site storm drainage system and bio-retention area has been designed and sized to ensure that peak stormwater flows from the site do not exceed the design capacity of the municipal stormwater system. The City's downstream storm drain facilities were designed to accept a 10-year design storm flow rate of 40 cubic feet per second (cfs) for the project site's drainage area. The project storm drainage plan provides bio-retention areas with stormwater detention facilities near each point of connection between the project and the City's storm drain facilities. The size of each bio-retention area and associated detention facility is consistent with applicable requirements as demonstrated in the calculations provided in Appendix I. The storm drainage system has been designed to ensure that treatment and flow control for the site ensure that the post-construction flows leaving the site are in conformance with the 10-year design flow rate of 40 cfs and with applicable local requirements, as demonstrated by the plans and calculations provided in Appendix I.

Chapter 15.06, Stormwater Management and Discharge Control, of the City's Municipal Code requires the project to prepare and adhere to a stormwater control plan and stormwater control operation and maintenance plan that meets the requirements of the City's NPDES permits and the criteria in the most recent version of the Contra Costa Clean Water Program Stormwater C.3. Guidebook. Stormwater management facilities are required to include water quality measures to meet NPDES permit requirements and to include best management practices identified at Section 15.06.090. Chapter 15.04 requires that all stormwater management facilities be maintained. The City Engineer reviews all storm drainage plans as part of the improvement plan submittal to ensure that all facilities are designed to the City's standards and specifications. The City Engineer also reviews all storm drainage plans to ensure that the capacity of the existing storm drainage system is not exceeded. Implementation of the proposed storm drain plan in compliance with the requirements of Chapter 15.06 would ensure that the proposed project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, significant erosion on-or off-site, exceed the capacity of the stormwater drainage system, or provide substantial additional sources of polluted runoff. Implementation of the proposed project in conformance with the City's storm drainage requirements would have a ***less-than-significant*** impact relative to this environmental topic.

Response f): The project's potential to otherwise substantially degrade water quality is less than significant.

Construction activities including grading could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of soil and could adversely affect water quality in nearby surface waters. The RWQCB requires a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area one acre or larger. The SWPPP is required to include project specific best management measures that are designed to control drainage and erosion. Mitigation Measure Geo-2 would require the preparation of a SWPPP to ensure that the proposed project prepares and implements a SWPPP throughout the construction phase of the project. Furthermore, the proposed project includes a detailed project specific drainage plan that controls storm water runoff and erosion after construction. The SWPPP (Mitigation Measure Geo-2) and the project specific drainage plan prepared in conformance with Chapter 15.06 would reduce the potential for polluted runoff and/or degradation of water quality. Implementation of the proposed project would result in a ***less-than-significant*** impact relative to this topic.

Responses g-h): The project would not place housing or structures within a 100-year flood hazard area.

The project site is located within Flood Zone X, which is not within the 100-year flood zone as shown on the Flood Insurance Rate Map (FIRM). Implementation of the proposed project would have ***no impact*** relative to this environmental topic.

Response i): The project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

The project site is not located within a flooding hazard area, including an area with a control levee or dam. The proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam. Implementation of the proposed project would have ***no impact*** relative to this environmental topic.

Response j): The project site does not have a significant risk of inundation by seiche, tsunami, or mudflow.

The project site is not anticipated to be inundated by a tsunami because it is located at an elevation of 187 feet above sea level and is 3.42 miles away from the Carquinez Strait which is the closest ocean/bay water body. Implementation of the proposed project would have **no impact** relative to this environmental topic.

The project site is not anticipated to be inundated by a seiche because it is not located in close proximity to a water body capable of creating a seiche. Implementation of the proposed project would have **no impact** relative to this environmental topic.

A mudflow is a category of landslide that is associated with heavy saturation of soils and sometimes is associated with seismicity. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for mudflow. According to U.S. Geological Survey Open-File Report 97-745 (landslide folio of the San Francisco Bay Area), the project site is not mapped as having previously identified landslides or earthflows nor is it located within an area having debris flow source potential. Based on the results of the geotechnical reconnaissance and review of documents, Stevens, Ferrone & Bailey Engineering Company, Inc. (2011) did not observe evidence of adverse slope stability, erosion, or drainage conditions at the site. Additionally, they did not observe evidence of active, deep seated slope movement onsite or in the vicinity of the project site.

As discussed in the Geology and Soils section of this Initial Study, the project site is rolling with gentle slopes. The grading plan would require approximately 107,000 cubic yards of cut and 103,000 cubic yards of fill. The end result will be a net export of 4,000 cubic yards. The topography of the developed subdivision will be more flat than the existing condition; however, some slope will remain. The potential for landslides and mudflow is potentially significant. Mitigation Measure Geo-1 presented in the Geology and Soils section of this Initial Study requires a geotechnical evaluation and design for the proposed project prior to approval of a grading permit. The potential for landslides, including mudflow, is considered minimal after the grading and compaction of soils to a specified geotechnical standard as required by Mitigation Measure Geo-1. Implementation of Mitigation Measure Geo-1 would reduce the potential for landslides, including mudflows, to a **less-than-significant** level.

X. LAND USE AND PLANNING

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Physically divide an established community?			X	
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

*Responses to Checklist Questions***Response a): The project would not physically divide an established community.**

The proposed project is a residential subdivision on a former golf course that is surrounded by residential subdivisions. The proposed residential subdivision is consistent with the surrounding uses and would not physically divide an established community. Implementation of the proposed project would have a *less than significant* impact relative to this topic.

Response b): The project would not result in a potentially significant impact associated with the potential to 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.

The key planning documents that are directly related to, or that establish a framework within which the proposed project must be consistent, include:

- City of Martinez General Plan
- City of Martinez Zoning Ordinance

The project site has a residential General Plan land use designation with zoning of R-1-7500 (currently referred to as R-7.5), as confirmed by City Council Resolution 011-17. Resolution 011-17 found that a General Plan and Zoning amendment are not required in order to consider a subdivision of the project site for residential uses.

The City of Martinez General Plan land use policies that would avoid or mitigate an environmental effect and are relevant to the proposed project are identified below. Following each relevant policy or set of policies is an analysis of the project in relation to each policy.

General Plan Land Use Element*Protected Neighborhoods*

- 21.311 Existing neighborhoods shall retain their present housing roles and the existing residential character preserved and enhanced. Non-residential uses, other than those providing services primarily to residents within the neighborhoods, shall be prohibited.

- Analysis: The proposed project would not directly affect the existing neighborhoods; however, it would indirectly affect the residential houses along the perimeter roadways by changing the uses of the property adjacent to their property. The former golf course use would be changed to residential uses. The change to residential uses would be consistent in character to the existing residential uses along these perimeter roadways. The proposed residential uses would not conflict with the residential character of the neighborhood. The proposed project does not conflict with this policy.
- 21.312 To respect the established physical patterns of these neighborhoods, new residential structures should be similar in scale and type of accommodations to existing units.
 - Analysis: The proposed project would include the construction of residential homes on the project site. The project site is surrounded by single family homes and will be similar in scale to the residential developments to the north, east, and west of the project site. The single family units proposed by the project would be consistent with the the single family uses generally surrounding the project site.

General Plan Parks and Recreation Element

- 23.30 It is the policy of the City of Martinez to provide a variety of parks and recreational facilities to meet the recreational needs of the community through the development of a well-balanced park and trail system. It is recognized that new development will increase the need for park and recreational uses. Therefore, it is the policy of the City of Martinez to ensure that new development shall be responsible for providing facilities to serve this new growth. In order to implement this policy, the City shall require new development to finance the full cost of park and recreational improvements required as a result of such development. Fees may be accepted by the City to finance the required improvements in-lieu of construction of those improvements.
 - Analysis: All new housing in the City is required to adhere to the park dedication standards in the City, whether it is payment of the impact fee and/or creating and dedicating new parkland in accordance with the City of Martinez Municipal Code Chapter 21.46 – Park Dedication. The requirements outlined in the Municipal Code are consistent with the Quimby Act. The standard provided in the Municipal Code is as follows:

21.46.030 - Basic Standard. It is found and determined that the public interest, convenience, health, welfare and safety require that five (5) acres of property for each one thousand (1000) persons residing within the City be devoted to local park and recreational purposes.

The Municipal Code Section 21.46.040 provides that the formula for calculating park dedication is 2.8 people per dwelling unit

The proposed project would add 92 residential units, which is expected to generate a population of 258 people according to the Municipal Code Section 21.46.040 formula for calculated park dedication. This increase in people would result in an increased demand for 1.4 acres of parkland under the Municipal Code Chapter 21.46 – Park Dedication (five acres of parkland per 1,000 people).

The City park dedication in-lieu fee (as of June 2017) requires payment of \$5,095 for each single family residential unit constructed in the City. The project applicant does not propose any park development and dedication within the project site and the General Plan does not identify the project site for a public park. As such, the proposed project is subject to the City park dedication in-lieu fees. The City of Martinez uses the park dedication in-lieu fees to acquire and develop park facilities based on demands. In addition to the park dedication in-lieu fees, the City of Martinez charges an Impact/Mitigation Fee for parks and recreation. The current fee for parks and recreation impacts is \$2,509 per single-family residential unit, the fees are subject to future changes.

The payment of the City park dedication in-lieu fees and the Impact/Mitigation Fee for park and recreation by the project proponent would ensure that the proposed project implements this policy. Physical impacts to parks are discussed in Sections XIV, Public Services, and XV, Recreation

General Plan Housing Element

- 2.7 Energy Conservation Improvements. Encourage energy conservation improvements and promote energy conservation programs through rehabilitation loan programs, City staff training and the distribution of information on energy conservation improvements.
 - Analysis: Mitigation Measure Air-1 requires compliance with the BAAQMD Indirect Source Rule which will result in either the incorporation of renewable energy sources into buildings on the project site as an emissions offset option, or emission offsets that are funded by the project and implemented by the BAAQMD where opportunities are available in the region. This is a significant energy conservation measure. Mitigation Measure Air-2 was incorporated into this project to require the developer to install high efficiency appliances (refrigerator, fans, washers), furnaces, fans, and hearths, low-flow faucets, toilets, and showers, and water-efficient irrigation systems. The proposed project implements this policy.

General Plan Growth Management Element

- GM-P-2.1 Continue to require new development to pay its fair share of needed transportation improvements. The City has adopted and implemented a development mitigation program requiring developers to either construct facilities or pay the costs necessary to mitigate impacts of their development projects on the local transportation system. In addition to the local transportation impact fee program already in place, require mitigation of the impacts of development projects on the regional transportation system, through the establishment of a regional transportation impact fee or equivalent program. The City will continue to adhere to the requirements for consultation with affected jurisdictions and implementation of regional development mitigation fees or other mitigations in accordance with TRANSPAC adopted Sub-regional Transportation Mitigation Program (STMP).
 - Analysis: The proposed project is subject to the City of Martinez Impact/Mitigation fees for transportation. The project applicant will be required to pay this fee. This Initial Study includes a Traffic Analysis prepared to assess the proposed project's traffic related impacts. The analysis is contained in Section XVI Transportation/Traffic. The project applicant will be responsible for the

construction of all roads internal to the project site as well as the perimeter improvements to Morello Avenue, Center Avenue, and Vine Hill Way where frontage improvements are required. The proposed project does not conflict with this policy.

- GM-P-2.3 Approval of development projects are contingent upon the project meeting the following conditions: 1) No revenue from Measure J has been used to replace or provide the developer funding for any mitigation project; 2) the development project will fully fund public facilities and infrastructure necessary for mitigating any impacts from the project; and 3) Full payment of mitigation fees for facilities and improvements in proportion to the project impacts.
 - Analysis: No revenue from Measure J has been used to replace or provide the developer funding for any mitigation project. The proposed project will fully fund public facilities and infrastructure necessary for mitigating any impacts from the project. Full payment of mitigation fees for facilities and improvements in proportion to the project impacts are required. The proposed project does not conflict with this policy.
- GM-P-6.1 Ensure and require that new development contribute to and maintain adopted and accepted performance standards for police, fire and emergency medical response and services.
 - Analysis: The project would not result in an environmental impact associated with provision of public services, including police, fire, and emergency medical response, is discussed in Section XIV, Public Services.
- GM-P-6.2 Adopt and maintain in place a development mitigation program to ensure new growth is paying its share of the costs associated with that growth.
 - Analysis: The City of Martinez has adopted Impact/Mitigation Fees that are required to be paid by all new development in the City. The proposed project is required to pay these fees. The proposed project does not conflict with this policy.

General Plan Hidden Lakes Specific Area Plan

32.3 Land Use and Development Policies

- 32.31 The major portion of the site area shall be retained for open space use, primarily preserved as public open space, with a portion preserved in private ownership.
- 32.34 Proposed development must be compatible with the Specific Area Plan with respect to natural terrain and vegetation, architectural and site design quality, adequacy of access and traffic impact.
- 32.341 Roads and buildings should be located in a manner which minimizes disturbance of the natural terrain and vegetation.
 - Analysis Policies 32.31, 32.34, and 32.41 through 32.341: The project is located within the Hidden Lakes Specific Plan Area. When adopted in the early 1970s, the Hidden Lakes Area Plan consisted of 565 acres of undeveloped pasture lands surrounded by residential subdivision. The intent of the Specific Area Plan was to preserve the string of small lakes at the center of the Plan Area as well as the natural

knolls and ridges at its border adjacent to the City of Pleasant Hill. The string of lakes has been preserved, is city-owned, and is located within the Hidden Lakes Park. The project site, at the northern portion of the Area Plan has been a private golf course since the 1970s, the facility is not considered park land or preserve. The topography of the project site was previously altered by the development of the golf course and associated facilities. The proposed project would include alteration of the topography on the entire project site similar to the alteration of topography that occurred when the neighboring properties were graded for development of a residential subdivision. The alteration will include terracing of lots to ensure flat building pads for home construction, while also balancing the cut and fill to maintain the natural slope of the project site from property line to project line. The effect of the terracing will minimize the total alteration of the topography by minimizing the total cut and export of soil. The alterations will also include grading of roadways to ensure roadway surfaces properly drain and are travelable by automobiles, bicycles, pedestrians, and disabled people. The preliminary grading plan (Appendix A) is designed to minimize any significant modifications to the topography to the extent possible while providing these functions. The project site does not contain high quality natural vegetation; rather it is irrigated turf and ornamentals associated with a golf course. The project does not conflict with the applicable policies.

- 32.32 The existing golf course is an appropriate use within the Plan area.
 - Analysis Policies 32.32: While Policy 32.32 states that the golf course is an appropriate use within the Plan area, the policy does not identify that such use is the only appropriate use. The designation of the site for residential uses by the General Plan identifies the City's intended use of the site as a residential development and the project is consistent with the residential designation.
- 32.342 Architecture should be of high quality. Building designs consistent with the nature of the area and which provide maximum flexibility in the site and grading should be utilized.
 - Analysis: The project includes three architectural styles, Traditional, Craftsman, and Farmhouse, which are available in five different four plans including one single-story plan and four two-story plans. The building styles and floor plans represent high-quality design that is consistent with established architectural styles. The project is subject to the City's Design Review process to ensure conformance with the City's architectural, site design, landscaping, and other aesthetic requirements.

32.423 Densities

- 32.4231 The base density for the Plan area shall permit one dwelling unit per 7,500 square feet of site area as allocated under a R-1 Zoning classification.
 - Analysis: Applying the base density of one dwelling unit per 7,500 square feet to the project site results in 155 dwelling units. The project proposes 92 dwelling units, which results in an average density of one dwelling unit per 12,675 square feet. The project is consistent with the permitted density.

Zoning Ordinance

The project site is located in the R-7.5 one family residential district, which requires a 7,500 square feet minimum lot area. Single family dwellings are a permitted use in the R-7.5 district. The project's lot sizes and density are consistent with the Zoning Ordinance.

Summary

The above analysis indicates that the proposed project is substantially consistent with the applicable land use requirements of the General Plan and Zoning Ordinance. The proposed would not conflict with any applicable land use plan, policy, or regulation of the City of Martinez adopted to reduce, avoid, or mitigate an environmental effect. Implementation of the proposed project would have a ***less than significant*** impact relative to this issue.

Response c): The project would not conflict with any applicable habitat conservation plan or natural community conservation plan.

The boundary of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP or Plan) is approximately 15 miles east of the City of Martinez. There are no other HCP/NCCPs applicable to the project site. Implementation of the proposed project would have ***no impact*** relative to this issue.

XI. MINERAL RESOURCES

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Responses to Checklist Questions

Response a): The project would not 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.

The project site does not contain a known mineral resource that would be of value to the region and the residents of the state. The proposed project would not result in loss of a mineral resource. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response b): The project would not 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.

The project site does not contain a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The proposed project would not result in loss of a mineral resource. Implementation of the proposed project would have ***no impact*** relative to this issue.

XII. NOISE

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

Background

An *Environmental Noise Assessment* (2013) was prepared by JC Brennan Associates for the proposed project under contract to De Novo Planning Group. The following is a summary of the report, which is contained in Appendix K.

Regulatory Framework

City of Martinez General Plan Noise Element: The goal of the City of Martinez is to maintain or reduce noise intrusion levels in all areas of the City to levels considered acceptable by the community. The General Plan Noise Element provides the following policies:

To achieve the goal of acceptable noise levels in all sections of the City, the following objectives and statement of policy are presented:

- 1. The preservation and enhancement of the acoustical environment of the City of Martinez is recognized. In recent years, noise has been identified as a major environmental pollutive agent with substantial evidence documenting its detrimental effects on human health and well-being. The U.S. Environmental Protection Agency has stated that some 80 million people are significantly impacted by noise, half of whom are exposed to levels that can damage hearing or otherwise affect health. In addition to its potential hearing damage effects, noise acts as a source of annoyance, discomfort, sleep interference and disrupts communication and

relaxation. The City, therefore, should adopt specific plans and anti-noise measures to prevent and suppress objectionable noise levels throughout the community.

- 2. The City of Martinez should cooperate with Contra Costa County, the State of California, the Federal Government and private companies in a joint effort to plan, control and attain the preservation of a quiet environment.
- 3. The City should encourage private interests to devote resources to the cause of a quiet environment and its preservation.
- 4. The City should integrate the Noise Element into the Land Use and Circulation Elements and develop a local Noise Ordinance guided by noise data from the Noise Element.
- 5. The City should develop and implement an effective noise ordinance having appropriate noise level limits for various equipment, activities and land use categories~ including recreational activities.
- 6. The City should amend the building code to include the Noise Insulation Standards of the California Administrative Code, Title 25, Article 4, Section 1092, effective August 22, 1974, Ref. 2. The State's standards apply to all applications for building permits for multifamily dwellings, hotels and motels.
- 7. Parks and recreational areas should be protected from excessive noise to permit the enjoyment of sports and other leisure time activities.
- 8. Open space should be used, wherever practical, to isolate noise sources from sensitive land uses by the employment of adequate separation distances.
- 9. The City should discourage the establishment of acoustically incompatible land uses in juxtaposition or adjacency to each other.
- 10. The City should require the use of noise mitigating devices, such as wall barriers, berms, mufflers, sound traps, baffles, etc., to reduce noise intrusion from transportation and fixed sources.
- 11. The City should initiate an on-going noise assessment program for the purpose of determining changes in noise levels over time.

City of Martinez Municipal Code, Chapter 8.34 (Noise Control): The City of Martinez Municipal Code establishes acceptable noise level standards of 60 dB Ldn (exterior) and 45 dB Ldn (interior).

Additionally, the hours of operation for noise-producing construction equipment are also restricted through the Municipal Code. The operation of pile drivers, steam shovels, and pneumatic hammers used in construction, demolition, or other repair work, should be prohibited before 7:00 a.m. or after 7:00 p.m. Monday through Friday, and before 9:00 a.m. or after 5:00 p.m. on Saturdays, Sundays, and State, federal, or local holidays.

Contra Costa County Airport Land Use Compatibility Plan: The proposed project is located within the Airport Influence Area for the Buchanan Field Airport, as shown by Figure 3 in Appendix K. The Buchanan Field Airport Policies contained within the Contra Costa County Airport Land Use Compatibility Plan establishes acceptable exterior aircraft noise levels of 55 dB CNEL for single-family residential uses.

Existing Traffic Noise Levels

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD 77-108) was used to develop Ldn (24-hour average) noise contours for the primary project-area roadways. The model is based upon the CALVENO noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model predicts hourly Leq values for freeflowing traffic conditions, and is generally considered to be accurate within 1.5 dB. To predict Ldn values, it is necessary to determine the hourly distribution of traffic for a typical 24-hour period.

Existing traffic volumes were obtained from the traffic study prepared for the project. Day/night traffic distributions were based upon file data for similar roadways. Using these data sources and the FHWA traffic noise prediction methodology, traffic noise levels were calculated for existing conditions. Table 8 shows the results of this analysis. Appendix A in the Noise Report (Appendix K) provides the complete inputs and results for the FHWA traffic noise modeling.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segment. In some locations sensitive receptors may be located at distances which vary from the assumed calculation distance and may experience shielding from intervening barriers or sound walls. However, the traffic noise analysis is believed to be representative of the majority of sensitive receptors located closest to the project-area roadway segments analyzed in the report.

The actual distances to noise level contours may vary from the distances calculated by the FHWA model due to roadway curvature, grade, shielding from local topography or structures, elevated roadways, or elevated receivers. The distances reported in Table 8 are generally considered to be conservative worst-case calculations of noise exposure along the project-area roadways.

Table 8: Existing Traffic Noise Levels

Roadway	Segment	Noise Level at Closest Receptors (LDN)	Distances to Traffic Noise Contours LDN (Feet)		
			70dB	65 dB	60 dB
Morello Ave.	North of SR 4	62.5	19	41	88
Morello Ave.	North of Muir Rd.	61	15	32	70
Morello Ave.	Muir Rd. to Center Ave.	60.9	15	32	69
Morello Ave.	West Project Entrance to Center Ave.	N/A	N/A	N/A	N/A
Morello Ave.	South of Center Ave.	57.9	9	20	43
Center Ave.	West of Morello Ave.	54.6	6	12	26
Center Ave.	Morello Ave to Vine Hill Way	52.9	4	9	20
Center Ave.	East of Vine Hill Way	53.4	5	10	22
Muir Rd.	West of Morello Way	57.1	8	18	38
Muir Rd.	East of Morello Way	57.1	8	18	38
Vine Hill Way	South of Center Ave.	52.2	4	8	18
Vine Hill Way	Center Ave. To East Project Entrance	50.4	3	6	14
Vine Hill Way	North of Project Entrance	N/A	N/A	N/A	N/A

SOURCE: J.C. BRENNAN & ASSOCIATES, INC. - 2013

Community Noise Survey

A community noise survey was conducted to document existing ambient noise levels at the project site and neighboring properties along the perimeter roadways (Vine Hill Way, Center Avenue, and Morello Avenue). The data collected included the hourly average (Leq), median (L50), and the maximum level (Lmax) during the measurement period. Noise monitoring sites and the measured noise levels at each site are summarized in Table 9. Figure 1 shows the locations of the noise monitoring sites.

Community noise monitoring equipment included a Larson Davis Laboratories (LDL) Model 824 precision integrating sound level meter equipped with an LDL ½" microphone. The measurement system was calibrated using a LDL Model CAL200 acoustical calibrator before and after testing. The measurement equipment meets all of the pertinent requirements of the American National Standards Institute (ANSI) for Type 1 (precision) sound level meters.

Table 9: Existing Ambient Noise Monitoring Results

Location Site	LDN(DBA)	Measured Hourly Noise Levels (dBA)					
		Daytime (7am-10-pm)			Nighttime (10pm-7am)		
		LEQ	L50	LMAX	LEQ	L50	LMAX
West side of site, 60 feet centerline of Morello Avenue. A	NAtO	62.3	57.3	72.0	N/A		
East side of site, 60 feet centerline of Vine Hill Way. B	NAtO	52.6	49.5	66.6	N/A		
South side of site, 75 feet centerline of Center Avenue. C	NAtO	53.3	47.6	64.3	N/A		

SOURCE: J.C. BRENNAN & ASSOCIATES, INC. - 2013

Noise Standards

The noise standards applicable to the project include the relevant portions of the City of Martinez General Plan and Zoning Ordinance as described in the Regulatory Framework section above. The City of Martinez has established acceptable standards for noise levels as follows:

1. A day-night noise level (Ldn) of 45 dB is the standard for interior noise levels. An Ldn of 45 dBA is achieved by an allowable interior noise level of 35 dBA between 10 p.m. — 7 a.m. and 45 dBA between 7 a.m. — 10 p.m.
2. A day-night level (Ldn) of 60 dB is the standard for exterior noise. An Ldn of 60 dBA is a maximum noise level of 50 dBA between 10 p.m. — 7 a.m. and 60 dBA between 7 a.m. — 10 p.m.

Vibration Standards

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

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities. The City of Martinez does not have specific policies pertaining to vibration levels. However, vibration levels associated with construction activities and

railroad operations are addressed as potential noise impacts associated with project implementation.

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

Responses to Checklist Questions

Responses a, c): The project would not result in exposure to or generation of noise levels in excess of standards established in the General Plan, noise ordinance, or other applicable standards.

Traffic Noise at Existing Receptors

To describe future noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. Inputs to the model included traffic volumes for the proposed project provided by Abrams Associates. The FHWA model is based upon the Calven reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly Leq values for free-flowing traffic conditions. To predict Ldn/CNEL values, it is necessary to determine the day/night distribution of traffic and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Tables 10 and 11 show the noise levels associated with traffic on the local roadway network under the existing/background and existing/background plus project traffic conditions. As indicated by Tables 10 and 11, the related noise level increases under development of the proposed project are predicted to range between 0.0 to 0.5 dB. The data also shows the noise levels at various distances from the centerline of the roadways. These noise contours are developed to identify noise levels at existing noise sensitive residential uses along the roadway. The proposed project is not predicted to expose existing receptors to exterior or interior noise levels that exceed the City's allowable standards under the existing vs existing plus project scenario or the background vs. background plus project scenario. Therefore, the impact of traffic noise on existing receptors would be considered *less than significant*.

Table 10: Existing Traffic Noise Levels vs. Existing Plus Project Traffic Noise Levels

Roadway	Segment	Existing	Noise Levels (Ldn, dB) Existing + Project	Change (dB)	Distance to Existing + Project Traffic Noise Contours, feet ¹		
					70 dB Ldn	65 dB Ldn	60 dB Ldn
Morello Ave	North of SR-4	62.5	62.5	0.0	19	41	88
Morello Ave	North of Muir Rd	61.0	61.4	0.5	16	35	75
Morello Ave	Muir Rd to Center Ave	60.9	61.2	0.3	15	33	72
Morello Ave	West Project Entrance to Center Ave	N/A	57.6	N/A	9	19	41
Morello Ave	South of Center Ave	57.9	57.9	0.0	9	20	43
Center Ave	West of Morello Ave	54.6	54.7	0.1	6	12	27
Center Ave	Morello Ave to Vine Hill Way	52.9	53.0	0.1	4	9	20
Center Ave	East of Vine Hill Way	53.4	53.5	0.1	5	10	22

Roadway	Segment	Existing	Noise Levels (Ldn, dB) Existing + Project	Change (dB)	Distance to Existing + Project Traffic Noise Contours, feet ¹		
					70 dB Ldn	65 dB Ldn	60 dB Ldn
Muir Rd	West of Morello Way	57.1	57.2	0.1	8	18	39
Muir Rd	East of Morello Way	57.1	57.2	0.1	8	18	39
Vine Hill Way	South of Center Ave	52.2	52.2	0.0	4	8	18
Vine Hill Way	Center Ave to East Project Entrance	50.4	50.8	0.4	3	7	15
Vine Hill Way	North of Project Entrance	N/A	51.0	N/A	3	7	15

¹ DISTANCES TO TRAFFIC NOISE CONTOURS ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS. ACTUAL DISTANCES MAY VARY DUE TO SHIELDING FROM EXISTING NOISE BARRIERS OR INTERVENING STRUCTURES. TRAFFIC NOISE LEVELS MAY VARY DEPENDING ON ACTUAL SETBACK DISTANCES AND LOCALIZED SHIELDING.

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM ABRAMS ASSOCIATES AND J.C. BRENNAN & ASSOCIATES, INC. 2013.

Table 11: Background Traffic Noise Levels vs. Background Plus Project Traffic Noise Levels

Roadway	Segment	Existing	Noise Levels (Ldn, dB) Existing + Project	Change (dB)	Distance to Existing + Project Traffic Noise Contours, feet ¹		
					70 dB Ldn	65 dB Ldn	60 dB Ldn
Morello Ave	North of SR-4	62.6	62.6	0.0	19	41	89
Morello Ave	North of Muir Rd	61.4	61.5	0.1	16	35	76
Morello Ave	Muir Rd to Center Ave	61.0	61.2	0.2	16	34	72
Morello Ave	West Project Entrance to Center Ave	N/A	57.7	N/A	9	19	42
Morello Ave	South of Center Ave	57.9	58.0	0.0	9	20	44
Center Ave	West of Morello Ave	53.4	54.8	1.3	6	12	27
Center Ave	Morello Ave to Vine Hill Way	53.0	53.0	0.1	4	10	21
Center Ave	East of Vine Hill Way	53.5	53.6	0.1	5	10	22
Muir Rd	West of Morello Way	57.2	57.3	0.1	9	18	39
Muir Rd	East of Morello Way	57.2	57.3	0.1	8	18	39
Vine Hill Way	South of Center Ave	52.2	52.3	0.0	4	8	18
Vine Hill Way	Center Ave to East Project Entrance	50.5	50.9	0.4	3	7	15
Vine Hill Way	North of Project Entrance	N/A	50.7	N/A	3	7	14

¹ DISTANCES TO TRAFFIC NOISE CONTOURS ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS. ACTUAL DISTANCES MAY VARY DUE TO SHIELDING FROM EXISTING NOISE BARRIERS OR INTERVENING STRUCTURES. TRAFFIC NOISE LEVELS MAY VARY DEPENDING ON ACTUAL SETBACK DISTANCES AND LOCALIZED SHIELDING.

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM ABRAMS ASSOCIATES AND J.C. BRENNAN & ASSOCIATES, INC. 2013.

The cumulative context for noise impacts associated with the proposed project consists of the existing and future noise sources that could affect the project or surrounding uses. Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context. The total noise impact of the proposed project would be fairly small and would not be a substantial increase to the existing future noise environment.

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to the proposed project and other projects within the area. Table 12 shows cumulative traffic noise levels with and without the proposed project. Under cumulative conditions, there would not be significant increases in noise levels compared to the no project conditions. However, the 60, 65

and 70 dB Ldn contours would extend farther under cumulative conditions and potentially impact additional sensitive receptors. As shown, the proposed project would contribute no more than 1.3 dB Ldn to noise levels on roadways fronting residential uses along the study area roadways. Additionally, the proposed project would not cause new exceedances of the City of Martinez 60 dB Ldn exterior noise level standard. The traffic noise from the proposed project is not expected to produce noise levels that would exceed City standards. Increased project related traffic would increase traffic noise levels by less than the City standards at existing sensitive receptors. Consequently, this would result in a ***less than significant*** and ***less than cumulatively considerable contribution*** to cumulative noise levels.

Table 12: Cumulative No Project vs. Cumulative Plus Project

Roadway	Segment	Cumulative No Project	Noise Levels (Ldn, dB) Cumulative + Project	Change (dB)	Distance to Cumulative + Project Traffic Noise Contours, feet ¹		
					70 dB Ldn	65 dB Ldn	60 dB Ldn
Morello Ave	North of SR-4	63.0	63.0	0.0	21	44	96
Morello Ave	North of Muir Rd	61.9	62.0	0.2	18	38	82
Morello Ave	Muir Rd to Center Ave	60.8	60.9	0.2	15	32	69
Morello Ave	West Project Entrance to Center Ave	N/A	58.1	N/A	10	21	45
Morello Ave	South of Center Ave	58.4	58.4	0.0	10	22	47
Center Ave	West of Morello Ave	55.1	55.2	0.1	6	13	29
Center Ave	Morello Ave to Vine Hill Way	53.4	53.5	0.0	5	10	22
Center Ave	East of Vine Hill Way	53.9	54.0	0.1	5	11	24
Muir Rd	West of Morello Way	57.6	57.7	0.1	9	20	42
Muir Rd	East of Morello Way	57.6	57.7	0.1	9	20	42
Vine Hill Way	South of Center Ave	52.7	52.7	0.0	4	9	20
Vine Hill Way	Center Ave to East Project Entrance	50.9	51.2	0.4	3	7	16
Vine Hill Way	North of Project Entrance	N/A	51.5	N/A	3	8	16

¹ DISTANCES TO TRAFFIC NOISE CONTOURS ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS. ACTUAL DISTANCES MAY VARY DUE TO SHIELDING FROM EXISTING NOISE BARRIERS OR INTERVENING STRUCTURES. TRAFFIC NOISE LEVELS MAY VARY DEPENDING ON ACTUAL SETBACK DISTANCES AND LOCALIZED SHIELDING.

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM ABRAMS ASSOCIATES, INC. AND J.C. BRENNAN & ASSOCIATES, INC. 2013.

Traffic Noise at New Receptors

The existing vs existing plus project scenario and the background vs. background plus project scenario is not performed for “New” receptors because these receptors are not present under the existing or background conditions. As such, there is no impact to new receptors under these scenarios. The focus of this discussion is the cumulative plus project condition on new receptors.

The FHWA traffic noise prediction model was used to predict Cumulative plus Project traffic noise levels at the proposed residential uses associated with the project. Table 13 shows the predicted traffic noise levels at the proposed residential uses adjacent to the major project-area roadways. Appendix B in the Noise Report (Appendix K) provides the complete inputs and results to the FHWA traffic noise prediction model.

Table 13: Cumulative + Project Transportation Noise Levels at Proposed Residential Uses

Roadway	Receptor Description	Approximate Residential Setback, feet ¹	ADT	Predicted Traffic Noise Levels, Ldn			
				No Wall	6' Wall	7' Wall	8' Wall
Morello Ave.	Lot 1 Backyard / First Floor Façade	130'	15,060	56 dB	--	--	--
Center Ave.	Lots 35-47 Backyards / First Floor Façade	80'	2,710	52 dB	--	--	--
Vine Hill Way	Lots 24-34 Backyards / First Floor Façade	75'	1,710	50 dB	--	--	--

¹ SETBACK DISTANCES ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS TO THE CENTER OF RESIDENTIAL BACKYARDS.

-- MEETS THE CITY OF MARTINEZ EXTERIOR NOISE STANDARD WITHOUT MITIGATION.

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM ABRAMS ASSOCIATES, AND J.C. BRENNAN & ASSOCIATES, INC. 2013.

The data shown above indicates that no additional noise control measures would be required to achieve compliance with the City of Martinez 60 dB Ldn exterior noise level standard for the proposed residential uses.

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

It should be noted that exterior noise levels are typically 2-3 dB higher at second floor locations. The proposed residential uses are predicted to be exposed to first floor exterior transportation noise levels ranging between 50 to 56 dB Ldn. Therefore, second floor facades are predicted to be exposed to exterior noise levels of up to 53-59 dB Ldn. Based upon a 25 dB exterior-to-interior noise level reduction, interior noise levels are predicted to range between 28 to 34 dB Ldn. With windows open a 15 dB exterior-to-interior noise level reduction is typically achieved. Therefore, interior noise levels are predicted to be 38-44 dB Ldn with the windows open. These interior noise levels would comply with the City of Martinez 45 dB Ldn interior noise level standard and no interior noise mitigation would be required.

The proposed project is not predicted to be exposed to exterior or interior noise level exceeding the City's allowable standards. Therefore, this impact would be considered **less than significant**.

Response b): The project would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and roadway construction occur; please note that construction noise is discussed under Response d) below. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located approximately 50 feet or further from the project site. At this distance, construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours. Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural. Table 14 shows the typical vibration levels produced by construction equipment.

Table 14: Vibration Levels for Varying Construction Equipment

<i>Type of Equipment</i>	<i>Peak Particle Velocity @ 25 Feet (Inches/Second)</i>	<i>Peak Particle Velocity @ 50 Feet (Inches/Second)</i>	<i>Peak Particle Velocity @ 100 Feet (Inches/Second)</i>
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (<0.200 @ 26')	0.074	0.026

SOURCE: FEDERAL TRANSIT ADMINISTRATION, TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES, MAY 2006

The closest exterior residence along Vine Hill Way is 65 feet from the project site. The closest exterior residence along Center Avenue is 75 feet from the project site. The closest exterior residence along Morello Avenue is 95 feet from the project site. The Table 14 data indicate that construction vibration levels anticipated for the project are less than the 0.2 in/sec p.p.v. threshold of damage to buildings and less than the 0.1 in/sec threshold of annoyance criteria at distances of 50 feet. All of the closest exterior residential walls along the perimeter roadways are beyond 50 feet but less than 100 feet, therefore, construction vibrations are not predicted to cause damage to existing the buildings along the perimeter roadways or cause annoyance to sensitive receptors in those buildings as construction vibration levels would be below the thresholds for damage and annoyance.

There are 18 residences that back to the northern boundary of the project site. Additionally, there are eight residences that back to the southwestern boundary of the project site. The distance from the project boundary to the residences varies from between 10 and 30 feet. The distance from these neighboring homes to the roadway area where vibratory equipment is a minimum of 110 feet. Vibratory equipment would be limited to the internal roadways during asphalt installation. The use of grading equipment adjacent to these neighboring homes will approach the 0.1 in/sec threshold of annoyance criteria; however, the grading phase will be the shortest phase of construction and grading in the area adjacent to these houses will take a day or two to complete.

Vibratory levels would be less than the threshold for damage to buildings and would be less than the standard of annoyance in most locations. The project does have the potential to approach the threshold of annoyance for the 18 residences to the north; however, these residences would only be subject to annoyance over a short period of time as previously described. Therefore, this impact would be considered *less than significant*.

Response d): The potential for the project to result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project is less than significant with incorporation of mitigation.

The proposed project could result in temporary or periodic increases in ambient noise levels in the project vicinity above levels existing without the project. These temporary or periodic increases in noise would be associated with the construction phase of the project. The new development, maintenance of roadways, installation of public utilities, and infrastructure improvements associated with the project will require construction activities. These activities include the use of heavy equipment and impact tools. Table 15 provides a list of the types of equipment which may be associated with construction activities and the associated noise levels.

Table 15: Construction Equipment Noise

Type of Equipment	Predicted Noise Levels, Lmax dB				Distances to Noise Contours (feet)	
	Noise Level at 50'	Noise Level at 100'	Noise Level at 200'	Noise Level at 400'	70 dB Lmax contour	65 dB Lmax contour
Backhoe	78	72	66	60	126	223
Compactor	83	77	71	65	223	397
Compressor (air)	78	72	66	60	126	223
Concrete Saw	90	84	78	72	500	889
Dozer	82	76	70	64	199	354
Dump Truck	76	70	64	58	100	177
Excavator	81	75	69	63	177	315
Generator	81	75	69	63	177	315
Jackhammer	89	83	77	71	446	792
Pneumatic Tools	85	79	73	67	281	500

SOURCE: ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE. FEDERAL HIGHWAY ADMINISTRATION. FHWA-HEP-05-054. JANUARY 2006. J.C. BRENNAN & ASSOCIATES, INC. 2013.

Activities involved in project construction would typically generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet. The closest residence along Vine Hill Way is 65 feet from the project site. The closest exterior residence along Center Avenue is 75 feet from the project site. The closest exterior residence wall along Morello Avenue is 95 feet from the project site. All of the closest exterior residential walls along the perimeter roadways are beyond 50 feet but less than 100 feet, therefore, construction noise levels are expected to range between 70 dB and 90 dB depending on the particular piece of construction equipment used and the actual distance of the particular receptors located along the perimeter roadway. It is important to note that this noise model does not reflect noise shielding that is created in the home building phase of construction from homes that are built backing up to the perimeter roadways.

There are 18 residences that back to the northern boundary of the project site. Additionally, there are eight residences homes that back to the southwestern boundary of the project site. The distance from the project boundary to the residences varies from between 10 and 30 feet. Construction grading equipment would be required to grade up to the property line, which is within 10 feet of a few of the existing homes located along the northern property line. Depending on the actual piece of equipment used, the noise levels could temporarily reach between 82 dB to 86 dB at these existing sensitive receptors.

As discussed above, construction could result in a temporary or periodic increase in ambient noise levels and the potential for annoyance. The City of Martinez Municipal Code exempts noise from construction activities during the daytime hours of 7:00 a.m. to 7:00 p.m. daily, except Saturday, Sunday, and State, Federal or Local Holidays, when the allowable time would be 9:00 a.m. to 5:00 p.m. There are also several best management practices that can reduce noise levels during construction including: utilizing critical grade mufflers and silencers on equipment, tuning backup beepers on equipment, and positioning stationary sources away from sensitive receptors. While there will be a construction-related noise impact from the temporary or periodic increase in ambient noise levels and the potential for annoyance on existing residents, the requirements of the City of Martinez Municipal Code relative to construction noise and best management practices discussed above are intended to minimize the impact to the extent practicable. With the implementation of the following Mitigation Measures, the proposed project would have a **less than significant** impact relative to this topic.

Mitigation Measure Noise-1: All project construction activities shall comply with the City of Martinez Municipal Code requirements for construction noise which limits noise generating construction activities to the hours between 7:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 5:00 p.m. on Saturdays, Sundays, and holidays. These criteria shall be included in the improvement plans prior to initiation of construction.

Mitigation Measure Noise-2: All construction equipment shall comply with the following:

- Equipment utilizing combustion engines shall be equipped with "critical" grade (rather than "stock" grade) noise mufflers or silencers that are in good condition and appropriate for the equipment.
- Back up "beepers" shall be tuned to insure lowest possible noise levels while also serving the safety purpose of the backup sound indicator.
- Unnecessary idling of internal combustion engines shall be strictly prohibited.
- "Quiet" air compressors and other stationary sources shall be used where technology exists.
- Noise from construction worker radios shall be controlled to a point where they are not audible at existing residences bordering the project site.

Mitigation Measure Noise-3: Stationary noise sources, equipment warm up areas, and equipment storage areas shall be located at least 300 feet from any occupied residential dwellings unless noise-reducing engine housing enclosures or other appropriate noise screens are provided.

Mitigation Measure Noise-4: Prior to the issuance of grading permits, the construction contractor shall designate a "disturbance coordinator" who shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and require that reasonable measures warranted to correct the problem be implemented to the satisfaction of the City Engineer. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site and shall be included in a notice sent to neighbors identifying the construction schedule.

Response e): The project would not expose people residing or working in the project area to excessive noise levels associated with airport operations.

The closest airstrip is Buchanan Field in the City of Concord approximately two miles east of the project site. The project is not located within the existing or future noise contours, including 65, 70, and 75 CNEL contours, associated with the airport and thus would not be expected to be exposed to excessive noise levels associated with the airport (Buchanan Field Airport Master Planning Program, 2008). Implementation of the proposed project would result in **no impact** relative to this topic.

Response f): The project would not expose people residing or working in the project area to excessive noise levels associated with airstrip operations.

The project site is not located within the vicinity of a private airstrip. The closest airstrip is Buchanan Field in the City of Concord, discussed under Response e) above. Implementation of the proposed project would result in **no impact** relative to this topic.

XIII. POPULATION AND HOUSING

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

Responses to Checklist Questions

Response a): The project would not induce substantial population growth.

According to California Department of Finance population and housing estimates, the January 1, 2017 population in Martinez is 37,658 people. The proposed project would result in the construction of residential housing that would generate an estimated 258 people, based on the City's parkland calculations described in Section X, Land Use and Planning. This is an estimated 0.69 percent growth in Martinez. This growth is consistent with the growth allowed for the site by the General Plan and zoning. The future project residents may come from Martinez or surrounding communities. The proposed project would not include upsizing of offsite infrastructure or roadways. The installation of new infrastructure would be limited to the internal subdivision. The sizing of the infrastructure would be specific to the number of units proposed within the project site. Implementation of the proposed project would not induce substantial population growth in an area, either directly or indirectly. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Responses b-c): The project would not displace substantial numbers of existing housing or people.

The project site is located on a former golf course and does not currently have housing. The proposed project would not displace housing or people. Implementation of the proposed project would have ***no impact*** relative to this topic.

XIV. PUBLIC SERVICES

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?			X	
Parks?			X	
Other public facilities?				X

Responses to Checklist Questions

Response a): The project would not 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 fire protection, police protection, schools, parks, or other public facilities.

Fire Protection. The project site is currently under the jurisdiction of the Contra Costa County Fire Protection District (Fire District), which has three fire stations within the City limits. The nearest fire station is located at 251 Church St, near Pleasant Hill Road, approximately 1.42 miles west of the project site.

The Fire District receives ongoing revenues from existing and new developments that come mainly from property tax revenues. New developments are required to pay fees to the Fire District for plan review and inspection services. The fees are charged at the time of the plan review. These fees do not provide a significant revenue source for the Fire District according to their budgets.

Since 2009, the Fire District has addressed a number of fiscal and operational issues due to the significant reduction in revenue resulting from the economic downturn that began in December 2007. During this period, the Fire District has taken a number of actions to reduce costs in order to maintain essential service delivery. The Fire District instituted a station closure plan that included the closure of Fire Station #12 located at 1240 Shell Avenue, Martinez and currently has six closed stations.

The Fire District has restructured its operations, and developed a "roadmap to sustainability" that uses recent revenue growth to expand services and operational capacity. The District is currently updating its fleet through lease-purchase agreements, is restoring a capital and equipment reserve fund, and has plans to begin re-opening certain stations depending on improved revenues and future needs.

The two fire stations open in Martinez each operate at least one Paramedic Engine, each operated by a three-person company, including one paramedic. The Fire District's response-time goal for fire

calls is 5 minutes or less 90 percent of the time; in 2014, the Fire District had a 9 minute, 33 second or less response time for 90 percent of its calls. The Fire District's service delivery model is based on community threat, industry standards, (e.g. response time, staffing levels, operational capabilities), the risk level the community is willing to accept, and services the community expects/demands.

The Fire District currently provides fire services to the residential neighborhoods immediately surrounding the project site, as well as the former golf course. It is anticipated that the Fire District would continue to provide fire service for the project site and the surrounding neighborhoods from the Fire Station #13 located at 251 Church St.

The Fire District would receive ongoing revenues from each parcel through property tax assessments. These property tax revenues paid by the proposed project would provide the Fire District with funds for ongoing fire protection service.

The proposed project would not result in a need to construct a new fire station or physically alter an existing fire station. As previously stated, the Fire District is currently implementing measures to provide adequate response time, staffing levels, and operational capabilities to their service area. The Fire District would remain in its financial condition with the addition of the proposed project. The Fire District would receive property tax revenues from each parcel on the project site, and those funds are intended to pay for fire protection service. As the project would not require new or physically altered government facilities for fire protection, the proposed project's impact to fire service is considered *less than significant*.

Police Protection. The project site is currently under the jurisdiction of the City of Martinez Police Department. The Patrol Division consists of two Lieutenants, four Sergeants (watch commanders), four Corporals and seventeen Officers. The City of Martinez Police Department would continue to serve the project site and no changes in Police Services would occur.

The proposed project would add 92 residential units, which is anticipated to add 258 people to the City of Martinez, which would place additional demands for police service on the City of Martinez Police Department.

To offset the new demands, the City of Martinez charges an Impact/Mitigation Fee for new development. The fee is utilized by the City of Martinez Police Department to purchase new facilities and equipment as necessary to service new development. The current fee for police impacts is \$411 per single-family residential unit; however, the fees are subject to future changes. The payment of the fees by the project proponent would serve as adequate compensation for the police service impacts required by the proposed project. Additionally, the City of Martinez receives ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by new development to fund ongoing police service. The payment of required police Impact/Mitigation Fees and the ongoing tax revenues generated by the residential units would address the project's demand for police services. As the project does not require the construction or expansion of facilities for the provision of police services, the proposed project would have a less than significant impact associated with substantial adverse physical impacts associated with new or physically altered governmental facilities to provide police service.

Schools. The project site is currently under the jurisdiction of the Mt. Diablo Unified School District. The proposed project would result in new residential construction and would generate population such that there would be an increased demand for school services. School aged children would attend Hidden Valley Elementary School, Valley View Middle School, or College Park High School.

Based on the student generation rates for Martinez, the proposed project would generate approximately 21 K-5th grade students (0.224 students per single family detached unit), 12 6-8th grade students (0.128 students per single family detached unit), and 13 9-12th grade students (0.141 students per single family detached unit). The total student generation would be approximately 45 students. The Mt. Diablo Unified School District collects developer fees in order to assist in funding facility needs at sites. In accordance with Section 65995(h) of the California Government Code, the payment of statutory fees "...is deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." The payment of required school impact fees, as mandated by SB 50, to the Mt. Diablo Unified School District would reduce the proposed project's impact on schools to ***less than significant***.

Parks. The General Plan includes the following policy that addresses park dedication within the Hidden Lakes Specific Area Plan as follows:

- 32.61 Full park land or full payment of fees shall be charged against such development in the planning area. No credits for the provision of private recreational facilities shall be granted against park dedication fees.

All new housing in the City is required to adhere to the park dedication standards in the City, whether it is payment of the impact fee and/or creating and dedicating new parkland in accordance with the City of Martinez Municipal Code Chapter 21.46 – Park Dedication. The requirements outlined in the Municipal Code are consistent with the Quimby Act. The standard provided in the Municipal Code is as follows:

- 21.46.030 - Basic Standard. It is found and determined that the public interest, convenience, health, welfare and safety require that five (5) acres of property for each one thousand (1000) persons residing within the City be devoted to local park and recreational purposes.

The Municipal Code Section 21.46.040 provides that the formula for calculating park dedication is 2.8 people per dwelling unit.

The proposed project would add 92 residential units, which is expected to generate a population of 258 people according to the Municipal Code Section 21.46.040 formula for calculated park dedication. This increase in people would result in an increased demand for 1.29 acres of parkland under the Municipal Code Chapter 21.46 – Park Dedication (five acres of parkland per 1,000 people).

The City park dedication in-lieu fee (as of June 2017) requires payment of \$5,095 for each single family residential unit constructed in the City. The project applicant does not propose any park development and dedication within the project site and the General Plan does not identify the project site for a public park. As such, the proposed project is subject to the City park dedication in-lieu fees.

The City of Martinez uses the park dedication in-lieu fees to acquire and develop park facilities based on demands. In addition to the park dedication in-lieu fees, the City of Martinez charges an Impact/Mitigation Fee for parks and recreation. The current fee for parks and recreation impacts is \$2,509 per single-family residential unit; however, the fees are subject to future changes.

The payment of the City park dedication in-lieu fees and the Impact/Mitigation Fee for park and recreation by the project proponent would serve as adequate compensation for the park and

recreational demand from the proposed project. The City currently meets their overall standard with 226.5 acres of parkland, which is equivalent to 6.22 acres of parkland per 1,000 people. The payment of the City's required impact and mitigation fees would ensure adequate park services. As the project does not require the construction or expansion of facilities for the provision of park services, the proposed project would have a less than significant impact associated with substantial adverse physical impacts associated with new or physically altered governmental facilities to provide parks.

Other Public Facilities. The proposed project would not result in a need for other public facilities that are not addressed above, or in Section XVII Utilities and Service Systems. Implementation of the proposed project would have ***no impact*** relative to this issue.

XV. RECREATION

	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Responses to Checklist Questions

Responses a-b): The project would not 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 and the project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The General Plan includes a policy that addresses the existing golf course within the project site. The Hidden Lakes Specific Area Plan Land Use and Development policy states the following:

- 32.32 The existing golf course is an appropriate use within the Plan area.

The golf course was a private recreational facility and is not a required use. The golf course is currently not operational and the removal of the golf course features would not eliminate a current recreational amenity. The golf course is a privately owned and operated business with no guarantee of future availability to the public for recreational use. This facility is not considered a park, and is not parkland that has been acquired through the use of park dedication in-lieu fees or park dedication. The City of Martinez, including the citizens of the community, have no vested ownership in the privately held golf course.

As discussed in Section XIV, the General Plan includes Policy 32.61 which addresses park dedication within the Hidden Lakes Specific Area Plan and the City's Municipal Code identifies parkland dedication and fee requirements.

All new housing in the City is required to adhere to the park dedication standards in the City, whether it is through payment of the impact fee and/or creating and dedicating new parkland in accordance with the City of Martinez Municipal Code Chapter 21.46 – Park Dedication. The requirements outlined in the Municipal Code are consistent with the Quimby Act. The standard provided in the Municipal Code is as follows:

- 21.46.030 - Basic Standard. It is found and determined that the public interest, convenience, health, welfare and safety require that five (5) acres of property for each one thousand (1000) persons residing within the City be devoted to local park and recreational purposes.

As discussed in Section XIV, the project would generate a population of 258 people according to the Municipal Code Section 21.46.040 formula for calculated park dedication. This increase in people

would result in an increased demand for 1.29 acres of parkland under the Municipal Code Chapter 21.46 – Park Dedication (five acres of parkland per 1,000 people).

The City park dedication in-lieu fee (as of June 2017) requires payment of \$5,095 for each single family residential unit constructed in the City. The project applicant does not propose any park development and dedication within the project site and the General Plan does not identify the project site for a public park. The project does not include the construction of any park or recreation facilities. As such, the proposed project is subject to the City park dedication in-lieu fees.

The City of Martinez uses the park dedication in-lieu fees to acquire and development park facilities based on demands. In addition to the park dedication in-lieu fees, the City of Martinez charges an Impact/Mitigation Fee for parks and recreation. The current fee for parks and recreation impacts is \$2,509 per single-family residential unit; however, the fees are subject to future changes.

The payment of the City park dedication in-lieu fees and the Impact/Mitigation Fee for park and recreation by the project proponent would serve as adequate compensation for the park and recreational facilities required by the proposed project and would help to avoid significant deterioration of existing facilities. The City currently meets their overall standard with 226.5 acres of parkland, which is equivalent to 6.22 acres of parkland per 1,000 people. With the payment of in-lieu park fees and the City's park and recreation fees as required by the City, the proposed project's impact related to use of recreational facilities is considered ***less than significant***.

XVI. TRANSPORTATION/TRAFFIC

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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?		X		
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?		X		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	

Background

A *Transportation Impact Analysis* (2017) was prepared by Abrams Associates for the proposed project. The *Transportation Impact Analysis* is provided in Appendix L.

There are five study intersections that have been included in the analysis.

Project Study Intersections

1. Morello Avenue and the State Route 4 Westbound Ramps
2. Morello Avenue and the State Route 4 Eastbound Ramps
3. Morello Avenue at Center Avenue
4. Vine Hill Way and Center Avenue
5. Morello Avenue and the Main Project Entrance ("A" Street)
6. Center Avenue and the Proposed Secondary Project Entrance ("G" Street)

Traffic Analysis Scenarios

The study intersections were evaluated for the following six scenarios:

- Scenario 1: Existing Conditions – Level of Service (LOS) based on existing peak hour volumes and existing intersection configurations.
- Scenario 2: Existing Plus Project – Existing traffic volumes plus trips from the proposed project.
- Scenario 3: Baseline (No Project) Conditions – The Baseline scenario is based on the existing volumes plus growth in background traffic (for three years) plus the traffic from all reasonably foreseeable developments that could substantially affect the volumes at the project study intersections.
- Scenario 4: Baseline Plus Project Conditions – This scenario is based on the Baseline traffic volumes plus the trips from the proposed project.
- Scenario 5: Cumulative Conditions – This scenario includes cumulative volumes based on the most recent release of the Countywide Travel Demand Model.
- Scenario 6: Cumulative Plus Project Conditions – This scenario includes cumulative volumes plus the trips from the proposed project

Existing Roadway Network

The following is a detailed description of the roadways that could be affected by the project:

- State Route 4 (SR 4) – SR 4 is the primary east-west corridor in Contra Costa County. It connects Interstate 80 in the city of Hercules to the west with SR 160 and the cities of Oakley and Brentwood to the east. SR 4 is currently a six-lane freeway in the vicinity of the proposed project.
- Morello Avenue – Morello Avenue is a north-south collector roadway that extends north from Taylor Boulevard to Pacheco Boulevard on the north. It provides the closest access to and underneath the SR 4 freeway for the proposed project.
- Center Avenue – Center Avenue is a two lane east-west collector street extending from Howe Road to terminate at Marsh Drive to the east. It serves primarily school and residential traffic from the adjacent neighborhoods.
- Vine Hill Way – Vine Hill Way is a two lane collector street extending north from Morello Avenue to Muir Road. It serves primarily residential traffic from the adjacent neighborhoods.

Intersection Analysis Methodology

Existing operational conditions at the six study intersections have been evaluated according to the requirements set forth by the City of Martinez. Analysis of traffic operations was conducted using the 2010 Highway Capacity Manual (HCM) Level of Service (LOS) methodology with Synchro software.¹ Level of service is an expression, in the form of a scale, of the relationship between the capacity of an intersection (or roadway segment) to accommodate the volume of traffic moving through it at any given time. The level of service scale describes traffic flow with six ratings ranging from A to F, with “A” indicating relatively free flow of traffic and “F” indicating stop-and-go traffic characterized by traffic jams.

As the amount of traffic moving through a given intersection or roadway segment increases, the traffic flow conditions that motorists experience rapidly deteriorate as the capacity of the intersection or roadway segment is reached. Under such conditions, there is general instability in the traffic flow, which means that relatively small incidents (e.g., momentary engine stall) can cause

¹ 2010 Highway Capacity Manual, Transportation Research Board, Washington D.C., 2011

considerable fluctuations in speeds and delays that lead to traffic congestion. This near-capacity situation is labeled level of service (LOS) E. Beyond LOS E, the intersection or roadway segment capacity has been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it. Table 16 summarizes the relationship between LOS, average control delay, and the volume to capacity ratio at signalized intersections. Table 17 summarizes the relationship between LOS and delay at unsignalized intersections.

For signalized intersections, the City of Martinez's LOS standards are based on the average delay for the entire intersection. The HCM methodology determines the capacity of each lane group approaching the intersection. The LOS is then based on average control delay (in seconds per vehicle) for the various movements within the intersection. A combined weighted average control delay and LOS are presented for the intersection. A summary of the HCM results and copies of the detailed HCM LOS calculations are included in the appendix to the traffic report.

For unsignalized (all-way stop controlled and two-way stop controlled) intersections, the average control delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn) for those movements that are subject to delay. Operating conditions for unsignalized intersections are presented for the worst approach.

Table 16: Signalized Intersection Level of Service Definitions

<i>Level of Service</i>	<i>Description of Operations</i>	<i>Average Delay (sec/veh)</i>	<i>Volume to Capacity Ratio</i>
A	Insignificant Delays: No approach phase is fully used and no vehicle waits longer than one red indication.	< 10	< 0.60
B	Minimal Delays: An occasional approach phase is fully used. Drivers begin to feel restricted.	> 10 to 20	> 0.61 to 0.70
C	Acceptable Delays: Major approach phase may become fully used. Most drivers feel somewhat restricted.	> 20 to 35	> 0.71 to 0.80
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 to 55	> 0.81 to 0.90
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80	> 0.91 to 1.00
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80	> 1.00

SOURCES: 2010 HIGHWAY CAPACITY MANUAL, TRANSPORTATION RESEARCH BOARD, 2011)

Table 17: Unsignalized Intersection Level of Service Definitions

<i>Level of Service</i>	<i>Description of Operations</i>	<i>Average Delay (seconds/vehicle)</i>
A	No delay for stop-controlled approaches.	0 to 10
B	Operations with minor delays.	> 10 to 15
C	Operations with moderate delays.	> 15 to 25
D	Operations with some delays.	> 25 to 35
E	Operations with high delays and long queues.	> 35 to 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

SOURCE: 2010 HIGHWAY CAPACITY MANUAL, TRANSPORTATION RESEARCH BOARD, 2011)

Existing Intersection Capacity Conditions

The existing intersection geometry at each of the project study intersections can be seen in Figure 3 of the *Transportation Impact Analysis* (Appendix L). The traffic volumes at the study intersections for weekday AM and PM peak hours are presented in Figure 4 of the *Transportation Impact Analysis* (Appendix L). Traffic counts at all of the study intersections were conducted in November of 2013. Table 18 summarizes the associated LOS computation results for the existing weekday AM and PM peak hour conditions. As shown in Table 18, all of the signalized study intersections currently have acceptable conditions (LOS B or better) during the weekday AM and PM peak hours.

Table 18: Existing Intersection Level of Service Conditions

INTERSECTION		CONTROL	PEAK HOUR	EXISTING	
				Delay	LOS
1	MORELLO AVE & SR-4 WB RAMPS	Traffic Signal	AM	12.4	B
			PM	13.8	B
2	MORELLO AVE & SR-4 EB RAMPS	Traffic Signal	AM	11.3	B
			PM	14.4	B
3	MORELLO AVE & CENTER AVE	Traffic Signal	AM	13.1	B
			PM	13.8	B
4	VINE HILL WY & CENTER AVE	Traffic Signal	AM	8.3	A
			PM	8.2	A
5	MORELLO AVE & PROJECT ENTRANCE (A Street)	Side Street Stop	AM	N/A	N/A
			PM	N/A	N/A
6	CENTER AVE & PROJECT ENTRANCE (G Street)	Side Street Stop	AM	N/A	N/A
			PM	N/A	N/A

SOURCE: ABRAMS ASSOCIATES, 2017

NOTES: HCM LOS RESULTS ARE PRESENTED IN TERMS OF AVERAGE INTERSECTION DELAY IN SECONDS PER VEHICLE. FOR STOP CONTROLLED INTERSECTIONS THE RESULTS FOR THE WORST SIDE STREET APPROACH ARE PRESENTED.

Pedestrian and Bicycle Facilities

Bicycle paths, lanes and routes are typical examples of bicycle transportation facilities, which are defined by Caltrans as being in one of the following three classes:

- *Class I* – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.
- *Class II* – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.
- *Class III* – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.

There are existing bike lanes on Morello Avenue and Center Avenue adjacent to the project.

Transit Service

The County Connection currently operates approximately 31 fixed-route bus routes on weekdays throughout Central Contra Costa County but has limited service in the project area. The route that serves the project area is Route 28. This route runs from the North Concord BART station to the Downtown Martinez Amtrak station. This route has a frequency of 60 minutes during peak periods and 90 minutes during off peak periods. It runs from 5:45 am to 8:46 pm during the weekdays.

Currently, the bus stop for Route 28 nearest to the proposed project is located at within walking distance on Morello Avenue, just north of Center Avenue.

Responses to Checklist Questions

Responses a-b): The project would not 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 nor would the project conflict with an applicable congestion management program or other standards established by the county congestion management agency for designated roads or highways.

Project Trip Generation

The proposed project will include 92 single family homes. The trip generation calculations are shown in Table 19. They are based on the average trip generation rates for (Land Use Code 210 – Single Family Detached Housing) from the Institute of Transportation Engineer’s (ITE) Trip Generation Manual, 9th Edition.

Table 19: Trip Generation Calculations

Land Use	Size	ADT	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single Family Dwellings	92 units	876	17	52	69	58	34	92

SOURCE: ABRAMS ASSOCIATES, 2017

The total trip generation reflects all vehicle trips that would be counted at the project entrances and exits, both inbound and outbound. Since the project is residential there were no adjustments applied to account for pass-by or internal trips. Although there is a potential for transit use no reduction has been applied to the project trip generation. The project is forecast to generate a total of 69 vehicle trips during the AM peak hour and 92 trips during the PM peak hour.

For purposes of determining the reasonable worst-case impacts of traffic on the surrounding street network from a proposed project, the trips generated by this proposed development are estimated for the peak commute hours which represent the peak of “*adjacent street traffic*”. This is the time period when the project traffic would generally contribute to the greatest amount of congestion.

Project Trip Distribution

The trip distribution assumptions have been based on the project’s proximity to freeway interchanges, existing traffic count data including daily directional volume and peak-hour turning movements, the Contra Costa County travel demand model, and existing knowledge of the surrounding area such as commute patterns and the overall land use patterns in the area. Figure 5 from the *Transportation Impact Analysis* (Appendix L) shows the project traffic that would be added at each of the study intersections.

Existing Plus Project Traffic Capacity Conditions

This scenario evaluates the existing conditions with the addition of traffic from the proposed project. The capacity calculations for the Existing Plus Project scenario are shown in Table 20. Please note that the corresponding LOS analysis calculation sheets are presented in the *Transportation Impact Analysis* (Appendix L). As shown in Table 20, all of the signalized study

intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours. Figure 6 from the *Transportation Impact Analysis* (Appendix L) presents the resulting existing plus project traffic volumes at each of the study intersections.

Table 20: Existing Plus Project Intersection Level of Service Conditions

INTERSECTION		CONTROL	PEAK HOUR	EXISTING		EXISTING PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	MORELLO AVE & SR-4 WB RAMPS	Traffic Signal	AM	12.4	B	12.7	B
			PM	13.8	B	14.0	B
2	MORELLO AVE & SR-4 EB RAMPS	Traffic Signal	AM	11.3	B	11.5	B
			PM	14.4	B	14.8	B
3	MORELLO AVE & CENTER AVE	Traffic Signal	AM	13.1	B	13.3	B
			PM	13.8	B	14.2	B
4	VINE HILL WY & CENTER AVE	Traffic Signal	AM	8.3	A	8.3	A
			PM	8.2	A	8.2	A
5	MORELLO AVE & PROJECT ENTRANCE (A Street)	Side Street Stop	AM	N/A	N/A	10.8	B
			PM	N/A	N/A	11.8	B
6	CENTER AVE & PROJECT ENTRANCE (G Street)	Side Street Stop	AM	N/A	N/A	8.9	A
			PM	N/A	N/A	8.8	A

SOURCE: ABRAMS ASSOCIATES, 2017

NOTES: HCM LOS RESULTS ARE PRESENTED IN TERMS OF AVERAGE INTERSECTION DELAY IN SECONDS PER VEHICLE. FOR STOP CONTROLLED INTERSECTIONS THE RESULTS FOR THE WORST SIDE STREET APPROACH ARE PRESENTED.

Baseline and Baseline Plus Project Traffic Capacity Conditions

The Baseline scenario evaluates the existing conditions with the addition of traffic from reasonably foreseeable projects in the area. This includes traffic from the recently completed Taco Bell project on Arnold Drive. In addition, the general baseline growth in traffic was developed based on the assumption that the project completion date would be 2019. This scenario includes all reasonably foreseeable projects that would significantly affect the traffic volumes in the project study area. Figure 7 from the *Transportation Impact Analysis* (Appendix L) presents the resulting baseline volumes at each of the project study intersections.

Table 21 summarizes the associated LOS computation results for the Baseline and Baseline Plus Project weekday AM and PM peak hour conditions. The Baseline plus proposed project traffic forecasts were developed by adding project-related traffic to the baseline traffic volumes. Figure 8 from the Traffic Analysis (Appendix K) presents the Baseline Plus Project traffic volumes that were used in the analysis. As noted above, Table 21 summarizes the LOS results for the Baseline Plus Project weekday AM and PM peak hour conditions (i.e. the existing roadway network). Please note that the corresponding LOS analysis calculation sheets are presented in Appendix L. As shown in Table 20, all of the signalized study intersections would continue to have acceptable conditions (LOS D or better) during the weekday AM and PM peak hours.

Table 21: Baseline Plus Project Intersection Level of Service Conditions

INTERSECTION		CONTROL	PEAK HOUR	BACKGROUND		BACKGROUND PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	MORELLO AVE & SR-4 WB RAMPS	Traffic Signal	AM	12.7	B	13.1	B
			PM	13.9	B	14.3	B
2	MORELLO AVE & SR-4 EB RAMPS	Traffic Signal	AM	11.5	B	11.7	B
			PM	14.6	B	15.1	B
3	MORELLO AVE & CENTER AVE	All-Way Stop	AM	13.9	B	14.2	B
			PM	14.1	B	14.4	B
4	VINE HILL WY & CENTER AVE	All-Way Stop	AM	8.4	A	8.4	A

INTERSECTION		CONTROL	PEAK HOUR	BACKGROUND		BACKGROUND PLUS PROJECT	
				Delay	LOS	Delay	LOS
			PM	8.2	A	8.2	A
5	MORELLO AVE & PROJECT ENTRANCE (A Street)	Side Street Stop	AM	N/A	N/A	11.0	B
			PM	N/A	N/A	11.8	B
6	CENTER AVE & PROJECT ENTRANCE (G Street)	Side Street Stop	AM	N/A	N/A	8.9	A
			PM	N/A	N/A	8.9\8	A

SOURCE: ABRAMS ASSOCIATES, 2017

NOTES: HCM LOS RESULTS ARE PRESENTED IN TERMS OF AVERAGE INTERSECTION DELAY IN SECONDS PER VEHICLE. FOR STOP CONTROLLED INTERSECTIONS THE RESULTS FOR THE WORST SIDE STREET APPROACH ARE PRESENTED.

Cumulative Year 2035 Traffic Capacity Conditions

The Cumulative Scenario, which represents 2035 conditions, corresponds to the build-out of the City of Martinez and Contra Costa County General Plans which includes many significant land use changes. For the cumulative conditions, the intersection traffic volumes were based on the existing turning movements with the addition of traffic from all planned and approved projects plus the addition of growth estimated by the County's traffic model. Figure 9 from the *Transportation Impact Analysis* (Appendix L) presents the future lane configurations used in the analysis. Figure 10 from the *Transportation Impact Analysis* (Appendix L) presents the cumulative build-out traffic at the project study intersections (without the proposed project). As shown in Table 22, all of the signalized study intersections would continue to have acceptable conditions (LOS D or better) under this scenario during the weekday AM and PM peak.

Table 22: Cumulative Intersection Level of Service Conditions

INTERSECTION		CONTROL	PEAK HOUR	CUMULATIVE		CUMULATIVE PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	MORELLO AVE & SR-4 WB RAMPS	Traffic Signal	AM	14.1	B	14.5	B
			PM	15.7	B	16.0	B
2	MORELLO AVE & SR-4 EB RAMPS	Traffic Signal	AM	12.7	B	13.0	B
			PM	16.5	B	17.1	B
3	MORELLO AVE & CENTER AVE	All-Way Stop	AM	16.3	C	16.7	C
			PM	16.4	C	17.1	C
4	VINE HILL WY & CENTER AVE	All-Way Stop	AM	8.6	A	8.7	A
			PM	8.4	A	8.5	A
5	MORELLO AVE & PROJECT ENTRANCE (A Street)	Side Street Stop	AM	N/A	N/A	11.4	B
			PM	N/A	N/A	12.4	B
6	CENTER AVE & PROJECT ENTRANCE (G Street)	Side Street Stop	AM	N/A	N/A	8.9	A
			P<	N/A	N/A	8.9	A

SOURCE: ABRAMS ASSOCIATES, 2017

NOTES: HCM LOS RESULTS ARE PRESENTED IN TERMS OF AVERAGE INTERSECTION DELAY IN SECONDS PER VEHICLE. FOR STOP CONTROLLED INTERSECTIONS THE RESULTS FOR THE WORST SIDE STREET APPROACH ARE PRESENTED.

Cumulative Plus Project Traffic Capacity Conditions

Figure 10 from the *Transportation Impact Analysis* (Appendix L) presents the cumulative build-out traffic volumes including the traffic from the proposed residential project. Table 22 summarizes the LOS results for the Cumulative Plus Project (Year 2035) traffic conditions at each of the project study intersections. As shown on this table, all of the signalized study intersections would continue to have acceptable conditions during the weekday AM and PM peak commute hours.

Construction Related Traffic

The increase in traffic as a result of demolition and construction activities associated with the proposed project has been quantified assuming single phase construction period of 48 months. This analysis assumes construction of the entire project in one phase to identify the potential worst-case traffic effects, however, the construction period could potentially last longer and occur in multiple phases.

Approximately four pieces of heavy equipment are estimated to be transported on and off the site each month throughout the demolition and construction of the proposed project. The project would also require the importation of construction material, including raw materials for the building pads, the buildings, streets, infrastructure, and landscaping. Based on past construction of similar projects, importing this material is estimated to require substantial amounts of truck traffic. Heavy equipment and construction material transport to and from the site could cause traffic impacts in the vicinity of the project site during construction; these impacts would be short-term and temporary.

The weekday work is expected to begin around 7:00 AM and end around 4:00 PM. The construction worker arrival peak would occur between 6:30 AM and 7:30 AM, and the departure peak would occur between 4:00 PM and 5:00 PM. These peak hours are slightly before the citywide commute peaks. Construction workers could require parking for up to 25 vehicles during the peak construction period. Additionally, deliveries, visits, and other activities may generate peak non-worker parking demand of 5 to 10 trucks and automobiles per day. Therefore, up to 35 vehicle parking spaces may be required during the peak construction period for the construction employees. The number of trips generated during construction would not only be temporary, but would also be substantially less than the proposed project at buildout.

Construction traffic could result in short-term delays that may exceed adopted levels of service, particularly associated with heavy equipment and construction material import; this is a potentially significant impact. Mitigation Measure Traffic-1, identified below, requires the project to implement a Traffic Control Plan during construction activities, which would ensure that the construction traffic would not result in noticeable congestion in the vicinity of the site by ensuring that construction traffic does not exceed the post-project traffic conditions analyzed in the *Transportation Impact Report*, that there would be no hazards associated with ingress or egress or on-site traffic operations, that heavy equipment and construction material import would follow designated routes to and from the project site, and that road conditions are monitored to address any debris or maintenance issues associated with project construction traffic.

Summary

Project Operations: As shown in the analysis above, the LOS calculations show that post-project future roadway conditions are anticipated to operate at acceptable levels of service. Upon project completion and operation, the proposed project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections and would not conflict with applicable measures of effectiveness for the performance of the circulation system. The proposed project is not expected to exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways. Therefore, project operations would have a **less than significant** impact associated with conflicting with an applicable plan, ordinance, or

policy establishing the measures of effectiveness for the circulation system and related to the potential to conflict with an applicable congestion management program.

Project Construction: The construction related traffic could result in a potentially significant impact associated with exceeding applicable measures of effectiveness for the performance of the circulation system. This impact is temporary and implementation of Mitigation Measure Traffic-1 would ensure that construction traffic would not result in significant impacts on the roadway network. With implementation of Mitigation Measure Traffic-1, construction of the proposed project would have a ***less than significant*** impact relative to this issue.

Mitigation Measure Traffic-1: The project shall implement a Traffic Control Plan for each phase of site preparation and project construction that includes, but is not limited to the following measures:

- Identify local traffic routes for heavy equipment, construction material loads, and large vehicles and require truck drivers, construction material deliveries, and large vehicles to use the identified route between the site and SR 4, as approved by the City Engineering Department;
- Require all site ingress and egress to occur only at the main driveways to the project site;
- Ensure that construction traffic would not exceed the post-construction traffic conditions by staggering the start time or overall phasing of site preparation and construction activities as necessary;
- Provide temporary traffic controls if determined necessary by the City Engineer, including monitoring and flagging specifically designated travel routes and/or ingress and egress points for heavy equipment and large vehicles;
- Limit the hours that importation and exportation of material can occur if such activities would cause a traffic nuisance;
- Identify on-site parking locations for construction workers during all phases of grading and project construction; and
- Monitor adjacent streets and nearby streets on the identified traffic route for construction-related mud and debris and provide for street cleaning as necessary.

Response c): The project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

The proposed project does not include airport or airstrip facilities, is not located adjacent to an airport or airstrip, and is not located within an airport land use area. Additionally, the proposed project does not include buildings over two stories, and there are no proposed towers or other elevated structures proposed. The proposed project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. Implementation of proposed project would have ***no impact*** relative to this topic.

Responses d-e): The project would not substantially increase hazards due to a design feature or incompatible use and would not result in inadequate emergency access.

No site circulation or access issues have been identified that would cause a traffic safety problem/hazard or any unusual traffic congestion or delay. The volumes on the internal residential roadways (with homes fronting on them) would be light enough so that no significant conflicts would be expected with through traffic and vehicles backing out of the driveways and/or garages within the project.

At the proposed project entrances on Morello Avenue, Center Avenue, and Vine Hill Way, the project would be required to meet the City's street design criteria, including requirements for design speeds, sight distance, and capacity. In addition, with the addition of project traffic none of the warrants for a traffic signal would be met at either location. The analysis indicates the intersections would continue to have safe operations in the future with the side street stop control and a traffic signal would not be required under cumulative plus project conditions.

Sufficient emergency access is determined by factors such as number of access points, roadway width, and proximity to fire stations. The proposed project would have one entrance on Morello Avenue, a one entrance on Center Avenue, and would also provide for an alternate emergency vehicle access via Vine Hill Way. All lane widths and curves within the project would meet the minimum width that can accommodate an emergency vehicle, including turning; therefore, the internal roadways would be adequate to accommodate emergency vehicles.

The project site is served by an existing network of City streets. The internal circulation is adequate for emergency personnel to access. The project would create no adverse impacts to emergency vehicle access or circulation. Compliance with applicable design standards and street design criteria would ensure that implementation of proposed project would have a ***less than significant*** relative to this topic.

Response f): The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The General Plan Transportation Element includes adopted policies that support public transit, bicycle, and pedestrian transportation that are as follows:

IV. Goal: Promote bicycle use.

- A. Policy: Implement the bikeway plan.
 - 1. Add bike lanes whenever possible in conjunction with road reconstruction or restriping projects in accordance with the bikeway plan.
 - 2. Seek funding sources to implement the bikeway plan in locations where more than restriping is required.
 - 3. Work with Contra Costa County and other agencies to implement the regional bikeway system.
- B. Policy: Provide ancillary facilities necessary to encourage bicycling.
 - 1. Provide secure bicycle parking at all parks, schools, and public buildings.
 - 2. Require large employers to provide secure bicycle parking, lockers, and showers for employees.
- C. Policy: Increase bicycle safety.
 - 1. Sweep and repair bicycle lanes and paths on a continuing, regular basis.
 - 2. Ensure that bikeways are delineated and signed in accordance with Caltrans' standards.
 - 3. Ensure that all streets have bicycle-safe drainage grates and are free of hazards such as uneven pavement and gravel.

- 4. Maintain curb lane widths of at least 14 feet (20 feet if parking is allowed) even on streets without bikeways.
- D. Promote bicycle education.
 - 1. Teach bike safely in schools.
 - 2. Develop and distribute a map of Martinez and regional bikeways.

V Goal: Encourage commute alternatives.

- B. Policy: Enhance and plan for transit needs.
 - 1. Work with representatives of central and south County jurisdictions to develop Contra Costa commuterway.
 - 2. Work with transit providers to obtain better bus service in Martinez.
 - 3. Work with transit providers to provide bus turnout and shelters at bus stops.
 - 4. Review development proposals for ease of transit access.
 - 5. Require new developments to provide bus turnouts and shelters where appropriate.
 - 6. Support the provision of ferry service to Martinez.
 - 7. Support the provision of HOV lanes on I-680 and Highway 4.

VI Goal: Encourage pedestrian travel.

- A. Policy: Provide and maintain sidewalks where required.
 - 1. Require new developments to include sidewalks except in rural residential areas.
 - 2. Promote the addition of sidewalks to existing streets, except in rural residential areas.
 - 3. Install handicapped curb cuts in existing street corners.
 - 4. Monitor and repair damaged sidewalks.

The proposed project does not conflict with any of the above listed policies from the General Plan Transportation Element; the majority of the policies do not apply to the proposed residential development project, but rather apply to the City as an organization. The project will have adequate curb and lane widths to accommodate bicycles on internal streets, consistent with Goal IV, Policy C.4. The City reviewed the project for ease of transit access consistent with Goal V, Policies B4 and B.5; the project is close to a Route 28 stop located just north of the intersection of Center Avenue and Morello Avenue and does not require an additional transit stop. Consistent with Goal VI, Policy A.1, the project includes sidewalks on the internal streets and will connect to the existing sidewalks on Morello Avenue, Center Avenue, and Vine Hill Way.

The proposed project will add a small amount of transit users, pedestrians, and bicyclists who will utilize both existing and planned facilities serving the project site and the community at large. The internal streets will be designed to the City's standard for pedestrian sidewalks and the project would not remove or conflict with the existing bicycle, pedestrian, and transit facilities in the vicinity of the project. In addition, the proposed project would not create any new safety problems in the area, as the project's streets and intersections will be developed in conformance with the City's standards. The project would not conflict with the City's adopted Transportation Element addressing public transit, bicycle, or pedestrian facilities and would not otherwise decrease the

performance or safety of such facilities. Therefore, implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

XVII. TRIBAL CULTURAL RESOURCES

<i>Would the project:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
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)?		X		
b) 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

Background

A Determination of Eligibility and Effect for the Proposed Subdivision of the Vine Hill Property, Martinez (Peak and Associates 2013) was prepared for the proposed project (Appendix E) under contract to De Novo Planning Group. The following is based on that study.

The study included a review of literature maintained by the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University. This indicated that the area had not been surveyed in the past and no resources were known in the immediate project vicinity.

The Native American Heritage Commission (NAHC) was contacted by Peak & Associates for a Sacred Lands review. Correspondence requesting information and/or comment and a topographic map showing the Project were sent to the Indian Canyon Mutsun Band of Costanoan (Ann Marie Sayers, Chairperson), the Ione Band of Miwok Indians (Yvonne Miller, Chairperson), the Trina Marine Ruano Family (Ramona Garibay, Representative) and The Ohlone Indian Tribe (Andrew A. Galvan). No resources were identified on the project site. On October 5, 2017, the City sent a letter to the Ione Band of Miwok Indians, consistent with the requirements of Assembly Bill 52; to date, no comment has been received.

A field reconnaissance of the Area of Potential Effect (APE), defined by the property boundaries, was conducted on December 29, 2013 by Peak & Associates' Senior Archeologist Robert Gerry. No evidence of prehistoric occupation or use of this area was observed. Although the land is generally heavily disturbed due to development of the golf course, the periphery of the property is in relatively pristine condition and offered excellent ground visibility. The course itself was not in a verdant state at the time of the inspection, so surface visibility was still good.

The process of taking out the previously existing orchard prior to development of the golf course on the property would have been tremendously destructive to any prehistoric properties in the APE. Additionally, the absence of a reliable surface water supply in the immediate area makes this an unlikely location for prehistoric settlement.

Responses to Checklist Questions

Responses a,b): The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or determined by the local agency to be significant.

As a result of the identification and evaluation efforts, there are no known tribal cultural resources present. On October 5, 2017, the City sent a letter to the Lone Band of Miwok Indians, consistent with the requirements of Public Resources Code Section 21080.3.1; to date, no response has been received.

As with any surface inspection, there is some possibility that a buried site may exist in the area and be obscured by vegetation, fill, or other historic activities, leaving no surface evidence. There is the potential for buried tribal cultural resources on the site and the project's potential to impact such resources is potentially significant. Should tribal cultural resources, including artifacts or unusual amounts of stone, bone, or shell, be uncovered during construction activities, an archeologist should be consulted for an evaluation. Implementation of mitigation measure Cul-1 would require further investigations and avoidance methods in the event that a previously undiscovered tribal cultural resource is encountered during construction activities. Implementation of mitigation measure Cul-1 would require investigations and avoidance methods in the event that a previously undiscovered tribal cultural resource is encountered during construction activities and would ensure that that the project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or determined by the local agency to be significant.

XVIII. UTILITIES AND SERVICE SYSTEMS

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

Responses to Checklist Questions

Response a): The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Waste Discharge Requirements (WDRs) Order No. R2-2016-0023 NPDES NO. CA0037770

The proposed project would be served by the Mt. View Sanitary District (MVSD), which owns and operates the Mt. View Sanitary District Wastewater Treatment Plant (hereinafter the Plant), and its associated wastewater collection system (hereinafter collectively the Facility). The Plant and its associated Facility are permitted under Waste Discharge Requirements (WDRs) Order No. R2-2016-0023 NPDES NO. CA0037770 as adopted by the Regional Water Quality Control Board on May 11, 2016. The Order/Permit is effective through June 30, 2020 at which time the MVSD will seek the approval of a new Order/Permit. The MVSD Plant and Facility are currently in compliance with WDR Order No. R2-2016-0023 NPDES NO. CA0037770.

The MVSD owns and operates the Plant which provides advanced secondary treatment for domestic, commercial, and some industrial wastewater from unincorporated areas of Martinez and portions of the City of Martinez. The MVSD has a current average dry weather design treatment

capacity of 3.2 million gallons per day (MGD), and can treat peak wet weather flows up to 10.9 MGD. The average daily dry weather flow is estimated to be 1.007MGD.

The treatment system consists of screening, primary clarification, trickling filtration, ammonia removal nitrification bio-tower, secondary sedimentation, advanced secondary sand filtration, and UV disinfection. During periods of elevated wet weather influent flows, flows that exceed the biotower capacity may be routed around the biotower nitrification treatment step. According to the permit, the MVSD's wastewater collection system includes 73 miles of sewer collection lines and four pump stations.

Discharge from the Plant is secondary-treated, filtered, and disinfected effluent that is discharged to Moorhen Marsh, a constructed wetland that is the final component of the treatment process. Moorhen Marsh flows to Peyton Slough, where it combines with surface runoff to supply the downstream 137 acre McNabney Marsh. Flows from McNabney Marsh re-enter Peyton Slough, which is tributary to Carquinez Strait.

Sludge is thickened, anaerobically digested, and dewatered by centrifuge. In dry weather months, the sludge volume is further reduced in drying beds, and the runoff from these beds is collected and pumped back to the Plant headworks. Biosolids are presently used as alternative daily cover at the B&J Landfill in Dixon.

Because all storm water is routed through the Plant headworks, it is exempt from coverage under the State Water Board's statewide storm water NPDES general permit (WDRs for Discharges of Storm Water Associated with Industrial Activities, Excluding Construction Activities, NPDES General Permit No. CAS000001).

Single family residential units in the City of Martinez have an estimated wastewater flow rate of 172 gallons per day per unit. The proposed project would generate an estimated 15,824 gallons per day (0.0158 MGD) to be treated at the Plant. Given that the current permitted capacity of the wastewater treatment plant is 3.2 MGD, and the current flow is 1.007 MGD, the Plant has adequate capacity to serve the 0.0195 MGD of wastewater generated by the proposed project. The proposed project would not require new or expanded facilities at the Plant. The proposed project would be covered under MVSD's NPDES permit and would not exceed the wastewater discharge requirements in this Order. Implementation of proposed project would have a ***less than significant*** impact relative to this topic.

Response b): The project would not 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.

Water: Martinez provides water treatment and distribution services for residential, commercial, industrial, public and irrigation customers, as well as for fire protection uses. The City's water system infrastructure includes a water treatment plant, storage facilities, and the distribution system. The City owns and operates the Martinez Water Treatment Plant located at 3003 Pacheco. Martinez plans for capital needs through its Capital Improvement Program (CIP) that uses a five year planning horizon and is updated biannually with the City budget.

The *Water and Wastewater Districts MSR-SOI Study* (2015) indicates that the City's water distribution system infrastructure requires a series of improvements to address aging infrastructure. The City is implementing the recommendations as funding is available. These improvements are planned improvements that would occur regardless of the proposed project.

The City's sole source of water supply is untreated water purchased from Contra Costa Water District (CCWD). The City takes delivery of the water from the Martinez Reservoir, a terminal reservoir for the Contra Costa Canal. The City currently has six primary pump stations that supply water to four distribution system pressure zones; and eleven ground-level treated water storage reservoirs, which have a total capacity of 9.97 MG. The clearwell storage at the water treatment plant provides an additional 0.75 MG. Storage is primarily used for meeting diurnal fluctuations in demand; providing water for fire protection; and providing water during emergency outages of normal water supply facilities, i.e. pump stations and the treatment plant.

According to the City of Martinez *2015 Urban Water Management Plan*, total water use decreased from 5,229 acre-feet per year (AFY) in 2005 to 3,524 AFY in 2015. Residential uses used an estimated 1,777 AFY with an average residential demand of 67.2 gallons per capita per day (gpcd) in 2015. The proposed project would require approximately 15,518 gallons per day, which results in an annual demand of 17.38 acre feet. As such, the total filtration capacity of 14.7 million gallons per day is adequate capacity to serve the proposed project and would not require new or expanded facilities.

As no water treatment facilities would not be constructed or expanded in association with the project, implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Wastewater: The proposed project would be served by the MVSD, which provides wastewater collection, treatment, and disposal services to 4.73 square miles in the northeasterly portion of the City of Martinez and adjacent unincorporated lands to the northeast. The MVSD service area is contiguous on all sides with the Central Contra Costa Sanitary District (CCCSD). MVSD is an "island" within CCCSD's service area. The boundary of the MVSD and CCCSD service area is located along Center Street on the southern boundary of the project site.

The MVSD serves approximately 19,000 residents, with 8,800 residential connections and 280 commercial and industrial connections. The MVSD service area population is expected to grow to between 24,500 and 25,322 over the next 20 to 25 years, an increase of approximately 29 to 33 percent. The MVSD includes a 3.2 mgd (design capacity) wastewater treatment plant, approximately 73 miles of sewer main and four pump stations. The Plant averages 1.007 mgd as measured in 2012 as part of the District's System Reliability Evaluation study. The primary disposal method is advanced secondary treatment and discharge into Peyton Slough and Moorhen Marsh area adjacent to MVSD's Plant.

As previously described, the proposed project would generate 0.0158 MGD to be treated at the Plant which is within the current permitted capacity of Plant.

As no wastewater treatment facilities would not be constructed or expanded in association with the project, implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Response c): The project would require or result in the construction of new storm water drainage facilities or expansion of existing facilities; environmental effects associated with these facilities would be less than significant with the incorporation of mitigation.

The proposed project would require the installation of storm water drainage infrastructure to ensure that storm waters properly drain from the project site. The proposed storm drainage plan includes an engineered network of storm drain lines, manholes, inlets, catch basins, and bio-retention areas. The construction of the storm drainage infrastructure would not cause

environmental effects beyond the limits of the project site. Physical disturbance of the project site would be initiated with grading. The installation of an underground network of storm drainage infrastructure would occur after grading during the trenching phase of construction. During this phase, excavators/backhoes would dig trenches and workers would place stormwater collection pipe into the trench to an engineering design and specification. After the wastewater pipe is installed the excavators/backhoes would backfill the trench and the underground network of storm drainage infrastructure would not be visible with the exception of manholes, inlets, catch basins, bio-retention areas, and pipe stubs. The above described construction of these facilities would not cause significant environmental effects on the environment beyond the environmental effects that are addressed throughout this Initial Study regarding the proposed project as a whole. Implementation of mitigation measures associated with project construction impacts, including Mitigation Measures Air-2, Bio-1, Bio-2, Bio-3, Cul-1, Cul-2, Geo-1, Geo-2, Haz-1, Haz-2, Haz-3, Haz-4, Noise-1, Noise-2, and Traffic-1, identified in this document would ensure that construction the storm drainage system results in a ***less than significant*** impact associated with environmental effects caused by construction of the storm drainage facilities.

Response d): There are sufficient water supplies available to serve the project from existing entitlements and resources; no new or expanded entitlements are needed.

Martinez provides water treatment and distribution services for residential, commercial, industrial, public and irrigation customers, as well as for fire protection uses. The City's sole source of water supply is untreated water purchased from Contra Costa Water District (CCWD). The City takes delivery of the water from the Martinez Reservoir, a terminal reservoir for the Contra Costa Canal. The City's water treatment facilities have a total filtration capacity of 14.7 million gallons per day (mgd). Average daily water use in 2015 was 3.5 mgd. According to the City of Martinez *2015 Urban Water Management Plan*, residential uses used an estimated 67.2 gallons per capita per day in 2015. The proposed project would require 15,518 gallons per day. As such, the total filtration capacity of 14.7 million gallons per day is adequate capacity to serve the proposed project and would not require new or expanded facilities.

The City of Martinez *2015 Urban Water Management Plan* indicates that the City should have adequate water supplies to meet normal, single, and multiple dry year periods through 2040 based on available supplies, City and CCWD activities to provide for reliable water supplies, and local water conservation. The proposed project would have sufficient water supplies available to serve the project from existing entitlements and resources. New or expanded entitlements are not needed. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Response e): The project would result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments.

The proposed project would be served by the MVSD, which owns and operates the Plant and its associated wastewater collection system. As previously described, the MVSD Plant has a current average dry weather design treatment capacity of 3.2 MGD, and can treat peak wet weather flows up to 10.94 MGD. The current flow is estimated to be 1.007 MGD. The proposed project would generate an estimated 0.0158 MGD to be treated at the Plant, which is within the Plant's capacity.

The collection system serving the proposed project consists of six inch sewer mains. The project will construct a sewer line in Vine Hill Way that extends northerly from Lot D and easterly to the existing manhole in Rolling Hill Way. The length of the offsite sewer connection is approximately

300 feet and would occur within the existing MVSD easement. The Hydraulic Modeling Report prepared for MVSD by Carollo Engineers in April 2013 indicates that there is adequate capacity in the downstream sewer system to serve the project. While the capacity has been studied by Carollo Engineers and documented to be adequate, MVSD requires additional analysis to conform that the downstream facilities are adequate. If a pipeline is not adequate, the project will be required to repair or replace the downstream system to accommodate the project. Any repairs would be limited to the 6-inch sewers south of the freeway serving the project (MVSD, June 2, 2017). These MVSD requirements are conditions that will be placed on the VTSM and must be fulfilled prior to finalization of the map. Because this engineering step is not performed until Improvement Plans are prepared, the potential exists for a lack of capacity under the existing conditions. Improvements to the existing system would involve digging up and replacing sewer lines within the existing easements and rights-of-way. These repairs would result in temporary air quality and noise impacts associated with the construction activities. These repairs would be part of the project construction activities and would be subject to the construction mitigation measures, including Mitigation Measures Air-2, Bio-1, Bio-2, Bio-3, Cul-1, Cul-2, Geo-1, Geo-2, Haz-1, Haz-2, Haz-3, Haz-4, Noise-1, Noise-2, and Traffic-1, as identified in this document. Implementation of the mitigation measures associated with construction impacts would ensure that the proposed project would have a ***less than significant*** impact relative to MVSD's determination regarding adequate capacity.

Response f): The project would be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs.

The City of Martinez's disposal and green waste services are handled by contract with Republic Services. The City's contract provides for curbside recycling services, including green waste. Household hazardous waste (HHW) is handled through the HHW facility in Martinez, where residents must take their waste for proper disposal, although some hazardous waste, such as used oil, oil filters, and some electronic waste (televisions, computer monitors, keyboards, peripherals) can be placed for curbside pick-up. CalRecycle data indicates that residential uses in Martinez disposed of 9,132 tons of waste in 2016.

All non-recycled solid waste is processed at the Keller Canyon Landfill, which is a wholly-owned subsidiary of Allied Waste Industries. The Keller Canyon Landfill opened on May 7, 1992 as a Class II Landfill operating under permit number 07-AA-0032. The facility accepts municipal solid waste, non-liquid industrial waste, contaminated soils, ash, grit and sludges. Keller Canyon Landfill is closed to the public. Keller Canyon Landfill covers 1,399 acres of land; 244 acres are permitted for disposal. The site is permitted for up to 3,500 tons per day and currently handles approximately 2,500 tons of waste per day. CalRecycle data indicates that in 2016, single family residential uses in Martinez disposed of approximately 9,132 tons of waste (0.63 tons per household per year or approximately 3.45 pounds per day). The proposed project would generate an estimated 317.4 pounds per day of solid waste (0.16 tons per day). The Keller Canyon Landfill is permitted to allow up to 3,500 tons of waste per day. This excess daily capacity is more than sufficient to serve the proposed project's estimated 0.16 tons per day.

The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's estimated 0.16 tons per day solid waste disposal needs. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Response g): The project would comply with federal, state, and local statutes and regulations related to solid waste.

The Keller Canyon Landfill opened on May 7, 1992 as a Class II Landfill operating under permit number 07-AA-0032. The landfill has a composite liner system at the landfill designed to meet or exceed all state and federal regulations. The containment system consists of two feet of compacted clay with a maximum permeability of 1×10^{-7} cm/sec covered by an 80-mil-thick high-density polyethylene (HDPE) textured geomembrane. Beneath the liner system is a one-foot thick layer of sand that intercepts groundwater and conveys it to an adjacent wetlands mitigation area. The leachate collection and removal system is located directly on top of the composite liner. This system consists of a 12 oz/yd 2-cushion geotextile, a 1-foot-thick granular layer and a 6 oz/yd 2 filter geotextile. HDPE pipes are located within the granular layer to increase the system's efficiency.

The landfill has a groundwater monitoring system that consists of 24 wells, 19 piezometers and 4 springs which are sampled or measured monthly, quarterly or annually. Leachate is sampled from the leachate holding tanks after 50,000 gallons have accumulated. The site has a sedimentation basin that is monitored during and after each rainfall or quarterly, whichever is greater. Radiation is monitored by radiation detectors located at the scalehouse. Landfill gas monitoring probes are located at 29 positions around the perimeter of the site.

The City of Martinez implements a Solid Waste and Recycling Program provides for the protection of public health, safety, and the environment through waste prevention, diversion, collection, transfer, and disposal services. City staff works with the City's franchised service provider, Allied Waste Disposal, along with the County and other local government agencies, to establish refuse, waste prevention, and recycling services designed to meet community needs and satisfy State waste reduction requirements.

The City provides a Single Stream ("Brown Cart") curbside recycling program for single- and multi-family residences. This allows residents to commingle ("mix") all household recyclables in their recycling cart for collection. Single family residences are given a brown 64 gallon wheeled cart, where all recyclables are placed. The cart is placed on the curb each week on garbage day for collection.

The City provides residents with the ability to recycle lawn clippings and other yard waste with their 96 gallon green recycling carts. Pick up is every other week on the same day as garbage collection. Acceptable Yard Waste includes grass clippings, brush, weeds and leaves, hay and straw, prunings, and tree trimmings.

The City provides an opportunity for residents who do their own auto upkeep to recycle their car batteries, used oil, and oil filters at the curb.

The goal of these programs is to make recycling and diversion more convenient for the residents of Martinez, encouraging greater participation which will result in a higher recycling and diversion rates.

The proposed project would not change the existing compliance measures implemented by the landfill, or cause the landfill to violate federal, state, and local statutes and regulations related to solid waste. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE

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

Responses to Checklist Questions

Response a): The project's potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory would be reduced to less than significant with implementation of mitigation.

This Initial Study includes an analysis of the project impacts associated with the quality of the environment, including aesthetics, agricultural and forest resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems. The analysis covers a broad spectrum of topics relative to the potential for the proposed project to have environmental impacts. Section IV, Biological Resources, addresses potential impacts to biological resources, including fish and wildlife species and plant and animal communities. The project site is previously developed and there are no rare plant communities, riparian habitat, or other sensitive natural communities on the project site. There is the potential for protected wildlife species to be impacted by the project; Mitigation Measures Bio-1 and Bio-2 would reduce potential impacts to less than significant and ensure that the project does not have a considerable contribution to cumulative impacts to biological resources. The implementation of these mitigation measures would ensure that the project would not 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, or reduce the number or restrict the range of a rare or endangered plant or animal.

The project site does not contain any important examples of the major periods of California history, as discussed in Section V, Cultural Resources. There are no known prehistoric features or resources on the project site; however, there is the potential to uncover a buried resource. Implementation of mitigation measure Cul-1 would ensure that any discovered resources are analyzed by a qualified professional and that appropriate measures, such as avoidance, preservation, excavation, and/or documentation are implemented to address potential impacts to the resource and would reduce the project's impact to prehistoric resources to less than significant. It was found that the proposed project would have either no impact, a less than significant impact, or a less than significant impact with the implementation of mitigation measures. For the reasons presented throughout this Initial Study, the proposed project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. With the implementation of mitigation measures presented in this Initial Study, including Mitigation Measures Bio-1, Bio-2, Bio-3, Cul-1, and Cul-2, the proposed project would have a *less than significant* impact relative to this topic.

Response b): The project's potential to have impacts that are individually limited, but cumulatively considerable is reduced to less than significant with incorporation of mitigation.

This Initial Study includes an analysis of the project impacts associated with aesthetics, agricultural and forest resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems. The analysis covers a broad spectrum of topics relative to the potential for the proposed project to have environmental impacts. It was found that the proposed project would have either no impact, a less than significant impact, or a less than significant impact with the implementation of mitigation measures. These mitigation measures would also function to reduce the project's contribution to cumulative impacts to a less than significant level. Because all potential impacts would be mitigated to less than significant levels the proposed project is not expected to have individually or cumulatively significant impacts.

There are no significant cumulative or cumulatively considerable effects that are identified associated with the proposed project after the implementation of all mitigation measures presented in this Initial Study. With the implementation of all mitigation measures, including Mitigation Measures Air-1, Air-2, Bio-1, Bio-2, Bio-3, Cul-1, Cul-2, Geo-1, Geo-2, Haz-1, Haz-2, Haz-3, Haz-4, Noise-1, Noise-2, and Traffic-1, presented in this Initial Study, the proposed project would have a *less than significant* impact relative to this topic.

Response c): The project potential to have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly is reduced to less than significant with implementation of mitigation.

The proposed project involves the development of a previously developed site (former golf course and associated facilities). The proposed project would develop the site in a manner consistent with surrounding land uses and would be considered infill. Substantial adverse effects on human beings are not anticipated with implementation of the proposed project. During construction and demolition activities, the project could result in potential impacts related to air quality, hazardous materials, including lead-based paints and asbestos, noise, and traffic that could adversely affect

affect human beings. Operation of the project could also result in potential impacts associated with light and glare, air quality, geology and soils, greenhouse gas emissions, and traffic that could adversely affect human beings. However, this IS/MND includes mitigation measures, including Mitigation Measures Air-1, Air-2, Bio-1, Bio-2, Bio-3, Cul-1, Cul-2, Geo-1, Geo-2, Haz-1, Haz-2, Haz-3, Haz-4, Noise-1, Noise-2, and Traffic-1, that would reduce any potential impacts to a less-than-significant level. In addition, the proposed project would be designed in accordance with all applicable building standards and codes to ensure adequate safety is provided for the future residents of the proposed project. Therefore, with implementation of mitigation measures, including Mitigation Measures Air-1, Air-2, Geo-1, Geo-2, Haz-1, Haz-2, Haz-3, Haz-4, Noise-1, Noise-2, and Traffic-1, and compliance with applicable federal, state, and local regulations and requirements, impacts related to environmental effects that could cause adverse effects on human beings would be **less than significant**.

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