County of Santa Cruz

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR
www.sccoplanning.com

NOTICE OF INTENT TO ADOPT A NEGATIVE DECLARATION

NOTICE OF PUBLIC REVIEW AND COMMENT PERIOD

Pursuant to the California Environmental Quality Act, the following project has been reviewed by the County Environmental Coordinator to determine if it has a potential to create significant impacts to the environment and, if so, how such impacts could be solved. A Negative Declaration is prepared in cases where the project is determined not to have any significant environmental impacts. Either a Mitigated Negative Declaration or Environmental Impact Report (EIR) is prepared for projects that may result in a significant impact to the environment.

Public review periods are provided for these Environmental Determinations according to the requirements of the County Environmental Review Guidelines. The environmental document is available for review at the County Planning Department located at 701 Ocean Street, in Santa Cruz. You may also view the environmental document on the web at www.sccoplanning.com under the Planning Department menu. If you have questions or comments about this Notice of Intent, please contact Juliette Robinson of the Environmental Review staff at (831) 454-3156.

The County of Santa Cruz does not discriminate on the basis of disability, and no person shall, by reason of a disability, be denied the benefits of its services, programs or activities. If you require special assistance in order to review this information, please contact Bernice Shawver at (831) 454-3137 to make arrangements.

PROJECT: Rodriguez Street Minor Land Division

APP #: 171063

APN(S): 026-063-16

PROJECT DESCRIPTION: This is a proposal to demolish a four unit dwelling group and all associated structures and divide an approximately one-half acre (23,586 square foot) parcel into three parcels of approximately 10,585 square feet, 5,016 square feet and 5,053 square feet respectively. Project requires a Minor Land Division, Variance to reduce the required minimum width of 50 feet to 45.6 feet and reduce the required minimum frontage from 5 feet to approximately 46 feet, and Residential Development Permit for creation of a right-of-way less than 40 feet in width.

PROJECT LOCATION: The proposed project is located on the north side of Rodriguez Street within the community of Live Oak in the unincorporated Santa Cruz County. Santa Cruz County is bounded on the north by San Mateo County, on the south by Monterey and San Benito counties, on the east by Santa Clara County, and on the south and west by the Monterey Bay and the Pacific Ocean.

APPLICANT/OWNER: Robert DeWitt for Vic Fergusson
PROJECT PLANNER: Nathan Macbeth
EMAIL: Nathan.Macbeth@santacruzcounty.us
ACTION: Negative Declaration
REVIEW PERIOD: October 25, 2018 through November 14, 2018

This project will be considered at a public hearing by the Planning Commission. The date, time and location have not yet been set. When scheduling does occur, these items will be included in all public hearing notices for the project.

COUNTY OF SANTA CRUZ

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NEGATIVE DECLARATION

Project: Rodriguez Street Minor Land Division **APN(S): 026-063-16**

Project Description: This is a proposal to demolish a four unit dwelling group and all associated accessory structures and divide an approximately one-half acre (23,586 square foot) parcel into three parcels of approximately 10,585 square feet, 5,016 square feet and 5,053 square feet respectively. Project requires a Minor Land Division, Variance to reduce the required minimum width of 50 feet to 45.6 feet and reduce the required minimum frontage from 50 feet to approximately 46 feet, and Residential Development Permit for creation of a right-of-way less than 40 feet in width.

Project Location: The proposed project is located on the north side of Rodriguez Street within the community of Live Oak in the unincorporated Santa Cruz County. Santa Cruz County is bounded on the north by San Mateo County, on the south by Monterey and San Benito counties, on the east by Santa Clara County, and on the south and west by the Monterey Bay and the Pacific Ocean. Santa Cruz County is bounded on the north by San Mateo County, on the south by Monterey and San Benito counties, on the east by Santa Clara County, and on the south and west by the Monterey Bay and the Pacific Ocean.

Owner: Vic Fergusson

Applicant: Robert DeWitt

Staff Planner: Nathan Macbeth, (831) 454-3118

Email: Nathan.Macbeth@santacruzcounty.us

This project will be considered at a public hearing before the Planning Commission. The time, date and location have not been set. When scheduling does occur, these items will be included in all public hearing notices for the project

California Environmental Quality Act Negative Declaration Findings:

Find, that this Negative Declaration reflects the decision-making body's independent judgment and analysis, and; that the decision-making body has reviewed and considered the information contained in this Negative Declaration and the comments received during the public review period, and; on the basis of the whole record before the decision-making body (including this Negative Declaration) that there is no substantial evidence that the project will have a significant effect on the environment. The expected environmental impacts of the project are documented in the attached Initial Study on file with the County of Santa Cruz Clerk of the Board located at 701 Ocean Street, 5th Floor, Santa Cruz, California.

Review Period Ends: November 14, 2018

Date: _____

_____
KATHY MOLLOY, Environmental Coordinator
(831) 454-3136

County of Santa Cruz

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KATHLEEN MOLLOY, PLANNING DIRECTOR
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CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
INITIAL STUDY/ENVIRONMENTAL CHECKLIST

Date: October 11, 2018 **Application Number:** 171063

Project Name: Rodriguez MLD **Staff Planner:** Nathan MacBeth

I. OVERVIEW AND ENVIRONMENTAL DETERMINATION

APPLICANT: Robert Dewitt **APN(s):** 026-063-16

OWNER: Vic Fergusson **SUPERVISORAL DISTRICT:** First District

PROJECT LOCATION: The proposed project is located on the north side of Rodriguez Street within the community of Live Oak in the unincorporated Santa Cruz County. Santa Cruz County is bounded on the north by San Mateo County, on the south by Monterey and San Benito counties, on the east by Santa Clara County, and on the south and west by the Monterey Bay and the Pacific Ocean.

SUMMARY PROJECT DESCRIPTION:

This is a proposal to demolish a four unit dwelling group and all associated accessory structures and divide an approximately one-half acre (23,586 square foot) parcel into three parcels of approximately 10,585 square feet, 5,016 square feet and 5,053 square feet respectively. Project requires a Minor Land Division, Variance to reduce the required minimum width of 50 feet to 45.6 feet and reduce the required minimum frontage from 50 feet to approximately 46 feet, and Residential Development Permit for creation of a right-of-way less than 40 feet in width.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: *All of the following potential environmental impacts are evaluated in this Initial Study. Categories that are marked have been analyzed in greater detail based on project specific information.*

- ☐ Aesthetics and Visual Resources
- ☐ Agriculture and Forestry Resources
- ☐ Air Quality
- ☐ Biological Resources
- ☐ Cultural Resources
- ☐ Geology and Soils
- ☐ Greenhouse Gas Emissions
- ☐ Mineral Resources
- ☐ Noise
- ☐ Population and Housing
- ☐ Public Services
- ☐ Recreation
- ☐ Transportation/Traffic
- ☐ Utilities and Service Systems

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: *All of the following potential environmental impacts are evaluated in this Initial Study. Categories that are marked have been analyzed in greater detail based on project specific information.*

- ☐ Hazards and Hazardous Materials
- ☐ Hydrology/Water Supply/Water Quality
- ☐ Land Use and Planning
- ☐ Tribal Cultural Resources
- ☐ Mandatory Findings of Significance

DISCRETIONARY APPROVAL(S) BEING CONSIDERED:

- ☐ General Plan Amendment
- ☒ Land Division
- ☐ Rezoning
- ☒ Development Permit
- ☐ Sewer Connection Permit
- ☐ Coastal Development Permit
- ☐ Grading Permit
- ☐ Riparian Exception
- ☐ LAFCO Annexation
- ☒ Variance

OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED (e.g., permits, financing approval, or participation agreement):

Permit Type/Action	Agency
N/A	N/A

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.
- ☐ 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 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.

Kathy Molloy — 10-22-2018

KATHY MOLLOY, Environmental Coordinator — Date

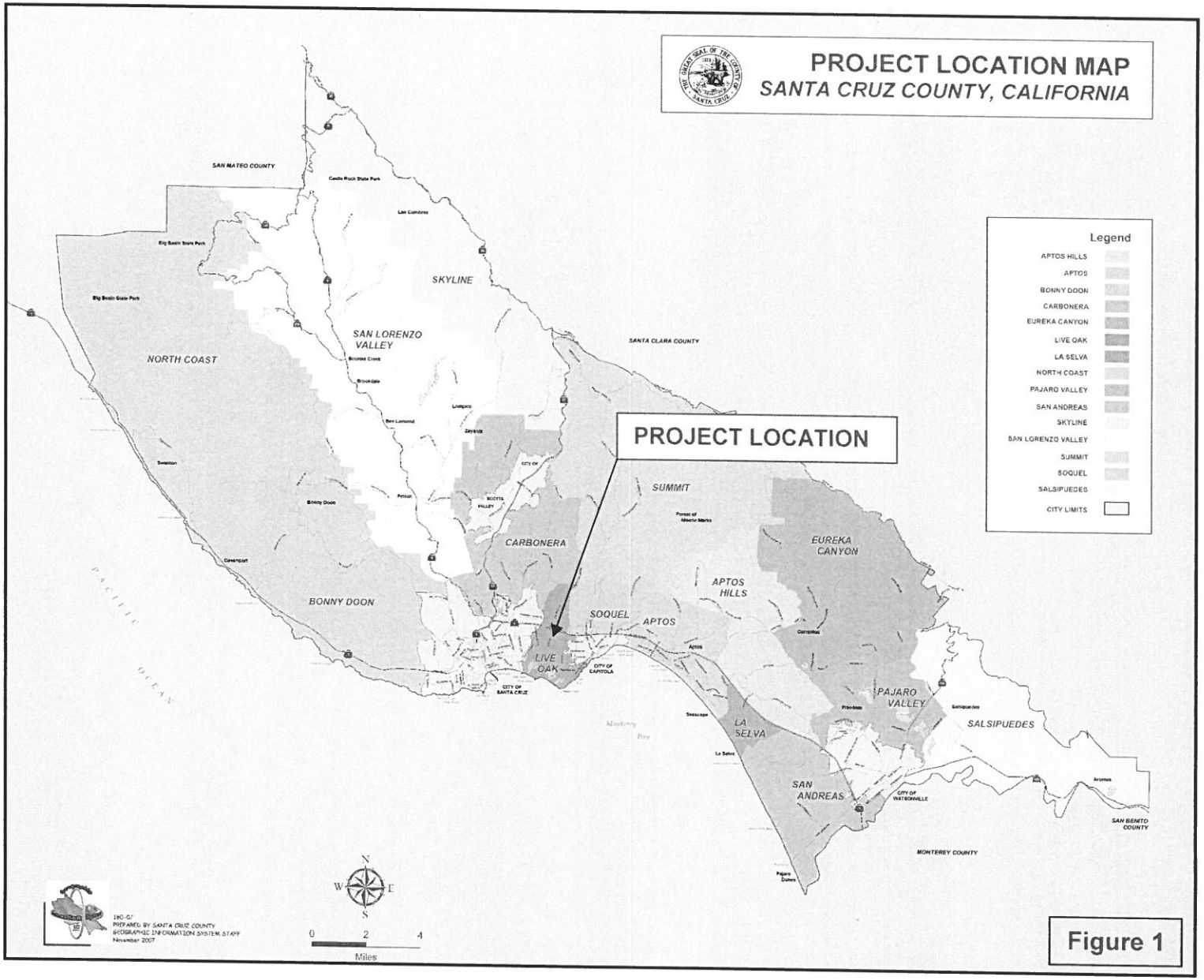
PROJECT LOCATION MAP
SANTA CRUZ COUNTY, CALIFORNIA
PROJECT LOCATION
Legend
APTOS HILLS
APTOS
BONNY DOON
CARBONERA
EUREKA CANYON
LIVE OAK
LA SELVA
NORTH COAST
PAJARO VALLEY
SAN ANDREAS
SKYLINE
SAN LORENZO VALLEY
SUMMIT
SOQUEL
SALSIPUEDES
CITY LIMITS
SAN MATEO COUNTY
SANTA CLARA COUNTY
MONTEREY COUNTY
SAN BENITO COUNTY
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Figure 1

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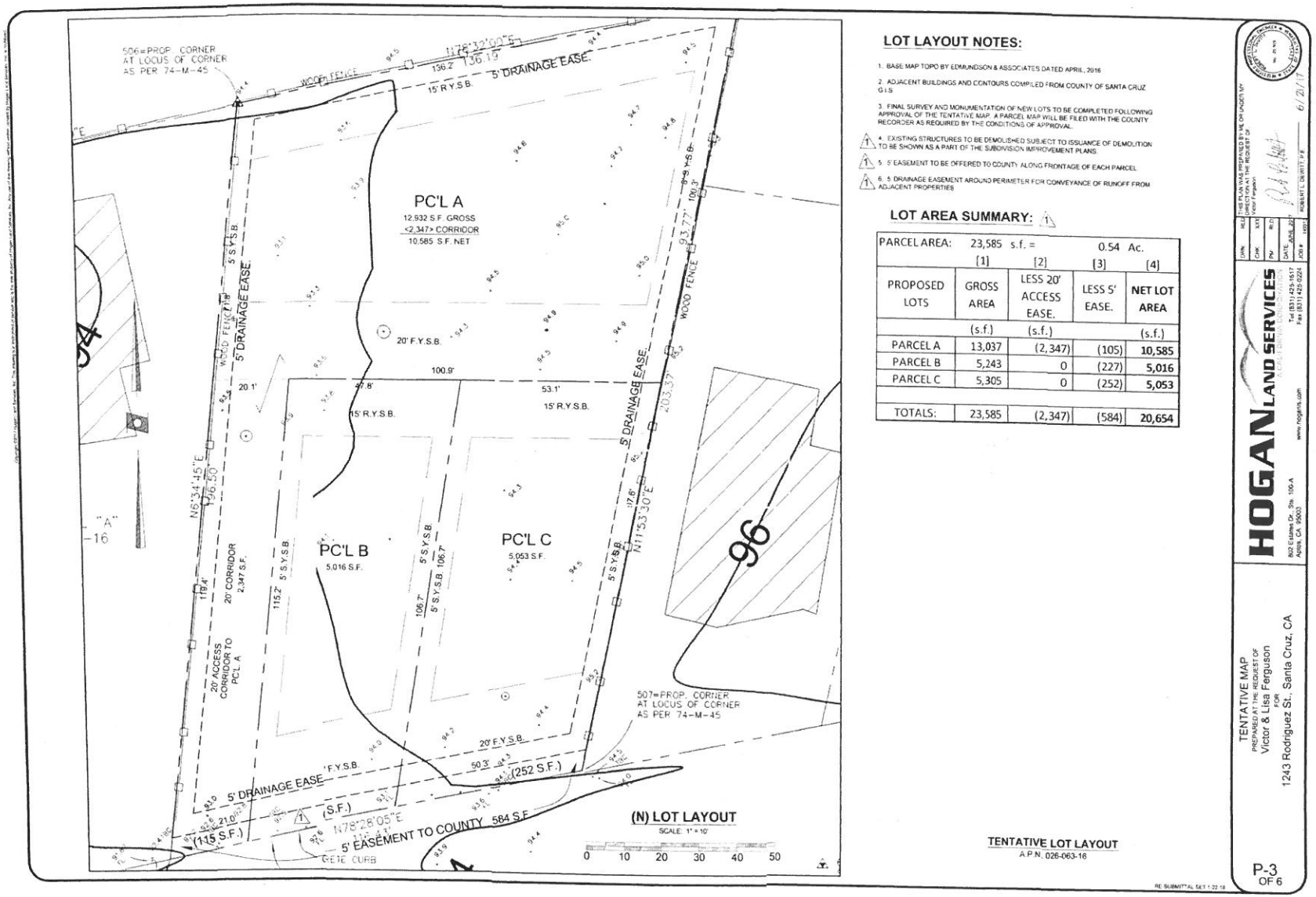

LOT LAYOUT NOTES:

1. BASE MAP TOPO BY EDMUNDSON & ASSOCIATES DATED APRIL, 2016
2. ADJACENT BUILDINGS AND CONTOURS COMPILED FROM COUNTY OF SANTA CRUZ G.I.S
3. FINAL SURVEY AND MONUMENTATION OF NEW LOTS TO BE COMPLETED FOLLOWING APPROVAL OF THE TENTATIVE MAP. A PARCEL MAP WILL BE FILED WITH THE COUNTY RECORDER AS REQUIRED BY THE CONDITIONS OF APPROVAL.
4. EXISTING STRUCTURES TO BE DEMOLISHED SUBJECT TO ISSUANCE OF DEMOLITION TO BE SHOWN AS A PART OF THE SUBDIVISION IMPROVEMENT PLANS.
5. 5' EASEMENT TO BE OFFERED TO COUNTY ALONG FRONTAGE OF EACH PARCEL
6. 5 DRAINAGE EASEMENT AROUND PERIMETER FOR CONVEYANCE OF RUNOFF FROM ADJACENT PROPERTIES

LOT AREA SUMMARY: 1

PARCEL AREA:	23,585 s.f. = [1]	[2]	0.54 Ac. [3]	[4]
PROPOSED LOTS	GROSS AREA	LESS 20' ACCESS EASE.	LESS 5' EASE.	NET LOT AREA
	(s.f.)	(s.f.)		(s.f.)
PARCEL A	13,037	(2,347)	(105)	10,585
PARCEL B	5,243	0	(227)	5,016
PARCEL C	5,305	0	(252)	5,053
TOTALS:	23,585	(2,347)	(584)	20,654

TENTATIVE LOT LAYOUT
A.P.N. 026-063-16

RE SUBMITTAL SET 1.22.18

THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECTION AT THE REQUEST OF: Victor Ferguson
6/20/17
ROBERT L. DEWITT P.E.

HOGAN LAND SERVICES
802 Estates Dr., Ste. 100-A
Aptos, CA 95003
Tel (831) 425-1517
Fax (831) 425-0224
www.hoganls.com

TENTATIVE MAP
PREPARED AT THE REQUEST OF
Victor & Lisa Ferguson
FOR
1243 Rodriguez St., Santa Cruz, CA

P-3
OF 6

Figure 2

Rodriguez Street MLD

Application Number: 171063

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II. BACKGROUND INFORMATION

EXISTING SITE CONDITIONS:

Parcel Size (acres): 23,585 square feet
Existing Land Use: Residential
Vegetation: Sparsely vegetated
Slope in area affected by project: ☒ 0 - 30% ☐ 31 – 100% ☐ N/A
Nearby Watercourse: Leona Creek
Distance To: 1,000 feet south of project site

ENVIRONMENTAL RESOURCES AND CONSTRAINTS:

Water Supply Watershed:	Not Applicable	Fault Zone:	Outside fault zone
Groundwater Recharge:	Not Applicable	Scenic Corridor:	Outside scenic corridor
Timber or Mineral:	Not Applicable	Historic:	Not applicable
Agricultural Resource:	Not Applicable	Archaeology:	Not mapped
Biologically Sensitive Habitat:	Not a mapped constraint	Noise Constraint:	Not Applicable
Fire Hazard:	Not a mapped constraint	Electric Power Lines:	Not present on site
Floodplain:	Not Applicable	Solar Access:	Not Applicable
Erosion:	Low potential	Solar Orientation:	Not applicable
Landslide:	Flat site	Hazardous Materials:	Not Applicable
Liquefaction:	Low potential	Other:	Not Applicable

SERVICES:

Fire Protection:	Central Fire	Drainage District:	Flood Control District 5

School District:	Live Oak School District	Project Access:	Rodriguez Street
Sewage Disposal:	Santa Cruz Sanitation District	Water Supply:	City of Santa Cruz Water

PLANNING POLICIES:

Zone District: R-1-5
General Plan: R-UM
Special Designation: N/A

Urban Services Line:	☒ Inside	☐ Outside
Coastal Zone:	☐ Inside	☒ Outside

ENVIRONMENTAL SETTING AND SURROUNDING LAND USES:

Natural Environment

Santa Cruz County is uniquely situated along the northern end of Monterey Bay approximately 55 miles south of the City of San Francisco along the Central Coast. The Pacific Ocean and Monterey Bay to the west and south, the mountains inland, and the prime agricultural lands along both the northern and southern coast of the county create limitations on the style and amount of building that can take place. Simultaneously, these natural features create an environment that attracts both visitors and new residents every year. The natural landscape provides the basic features that set Santa Cruz apart from the surrounding counties and require specific accommodations to ensure building is done in a safe, responsible and environmentally respectful manner.

The California Coastal Zone affects nearly one third of the land in the urbanized area of the unincorporated County with special restrictions, regulations, and processing procedures required for development within that area. Steep hillsides require extensive review and engineering to ensure that slopes remain stable, buildings are safe, and water quality is not impacted by increased erosion. The farmland in Santa Cruz County is among the best in the world, and the agriculture industry is a primary economic generator for the County. Preserving this industry in the face of population growth requires that soils best suited to commercial agriculture remain active in crop production rather than converting to other land uses.

PROJECT BACKGROUND:

The subject property is approximately ½ acre in size and zoned Single family residential (minimum 5,000 square feet parcel size) (R-1-5), which is consistent with the land use designation of Urban Medium Residential density (R-UM). The project site is developed with an existing nonconforming four unit dwelling group constructed between 1934 and 1948.

DETAILED PROJECT DESCRIPTION:

This is a proposal to demolish four unit dwelling group (currently vacant) and all associated accessory structures and divide an approximately one-half acre (23,586 square foot) parcel into three parcels of approximately 10,585 square feet, 5,016 square feet and 5,053 square feet respectively. Project requires a Minor Land Division, Variance to reduce the required minimum width of 50 feet to 45.6 feet and reduce the required minimum frontage from 50 feet to approximately 46 feet, and Residential Development Permit for creation of a right-of-way less than 40 feet in width.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

III. ENVIRONMENTAL REVIEW CHECKLIST

A. AESTHETICS AND VISUAL RESOURCES

Would the project:

1. *Have a substantial adverse effect on a scenic vista?* ☐ ☐ ☐ ☒

Discussion: The project would not directly impact any public scenic resources, as designated in the County's General Plan (1994), or obstruct any public views of these visual resources.

2. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?* ☐ ☐ ☐ ☒

Discussion: The project site is not located along a County designated scenic road, public viewshed area, scenic corridor, within a designated scenic resource area, or within a state scenic highway. Therefore, no impact is anticipated.

3. *Substantially degrade the existing visual character or quality of the site and its surroundings?* ☐ ☐ ☒ ☐

Discussion: The existing visual setting consists of a residential neighborhood. The proposed project is designed and landscaped so as to fit into this setting.

4. *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?* ☐ ☐ ☒ ☐

Discussion: The project would create an incremental increase in night lighting in that the project site is currently unoccupied. However, this increase would be small, and would be similar in character to the lighting associated with the surrounding existing uses.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

B. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

1. *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?*	☐	☐	☐	☒

Discussion: The project site does not contain any lands designated as 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. In addition, the project does not contain Farmland of Local Importance. Therefore, no Prime Farmland, Unique Farmland, Farmland of Statewide or Farmland of Local Importance would be converted to a non-agricultural use. No impact would occur from project implementation.

2. *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*	☐	☐	☐	☒

Discussion: The project site is zoned Single family residential (minimum 5,000 square foot parcel size), which is not considered to be an agricultural zone. Additionally, the project site's land is not under a Williamson Act contract. Therefore, the project does not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impact is anticipated.

3. *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Discussion: The project is not located near land designated as Timber Resource. Therefore, the project would not affect the resource or access to harvest the resource in the future.

4.	*Result in the loss of forest land or conversion of forest land to non-forest use?*	☐	☐	☐	☒

Discussion: No forest land occurs on the project site or in the immediate vicinity. See discussion under B-3 above. No impact is anticipated.

5.	*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?*	☐	☐	☐	☒

Discussion: The project site and surrounding area within a radius of two miles does not contain any lands designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance or Farmland of Local Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Therefore, no Prime Farmland, Unique Farmland, Farmland of Statewide, or Farmland of Local Importance would be converted to a non-agricultural use. In addition, the project site contains no forest land, and no forest land occurs within two miles of the proposed project site. Therefore, no impacts are anticipated.

C. AIR QUALITY

The significance criteria established by the Monterey Bay Air Resources District (MBARD) has been relied upon to make the following determinations. Would the project:

1.	*Conflict with or obstruct implementation of the applicable air quality plan?*	☐	☐	☒	☐

Discussion: The project would not conflict with or obstruct any long-range air quality plans of the Monterey Bay Air Resources District (MBARD). Because general construction activity related emissions (i.e., temporary sources) are accounted for in the emission inventories included in the air quality plans, impacts to air quality plan objectives are less than significant. See C-2 below.

General estimated basin-wide construction-related emissions are included in the MBARD emission inventory (which, in part, form the basis for the air quality plans cited below) and are not expected to prevent long-term attainment or maintenance of the ozone and particulate matter standards within the North Central Coast Air Basin (NCCAB). Therefore, temporary construction impacts related to air quality plans for these pollutants from the

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

proposed project would be less than significant, and no mitigation would be required, since they are presently estimated and accounted for in the District's emission inventory, as described below. No stationary sources would be constructed that would be long-term permanent sources of emissions.

2.	*Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*	☐	☐	☒	☐

Discussion: Santa Cruz County is located within the NCCAB. The NCCAB does not meet state standards for ozone (reactive organic gases [ROGs] and nitrogen oxides [NOx]) and fine particulate matter (PM_{10}). Therefore, the regional pollutants of concern that would be emitted by the project are ozone precursors and PM_{10}.

The primary sources of ROG within the air basin are on- and off-road motor vehicles, petroleum production and marketing, solvent evaporation, and prescribed burning. The primary sources of NOx are on- and off-road motor vehicles, stationary source fuel combustion, and industrial processes. In 2010, daily emissions of ROGs were estimated at 63 tons per day. Of this, area-wide sources represented 49 percent, mobile sources represented 36 percent, and stationary sources represented 15 percent. Daily emissions of NOx were estimated at 54 tons per day with 69 percent from mobile sources, 22 percent from stationary sources, and 9 percent from area-wide sources. In addition, the region is "NOx sensitive," meaning that ozone formation due to local emissions is more limited by the availability of NOx as opposed to the availability of ROGs (Monterey Bay Unified Air Pollution Control District, 2013b).

PM_{10} is the other major pollutant of concern for the NCCAB. In the NCCAB, highest particulate levels and most frequent violations occur in the coastal corridor. In this area, fugitive dust from various geological and man-made sources combines to exceed the standard. The majority of NCCAB exceedances occur at these coastal sites, where sea salt is often the main factor causing exceedance. In 2005 daily emissions of PM_{10} were estimated at 102 tons per day. Of this, entrained road dust represented 35 percent of all PM_{10} emission, windblown dust 20 percent, agricultural tilling operations 15 percent, waste burning 17 percent, construction 4 percent, and mobile sources, industrial processes, and other sources made up 9 percent (MBUAPCD, 2008).

Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Air quality impacts can nevertheless be acute during construction periods, resulting in significant localized impacts to air quality. Table 1 summarizes the threshold of significance for construction activities.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Table 1: Construction Activity with Potentially Significant Impacts from Pollutant PM_{10}	
Activity	**Potential Threshold***
Construction site with minimal earthmoving	8.1 acres per day
Construction site with earthmoving (grading, excavation)	2.2 acres per day

*Based on Midwest Research Institute, Improvement of Specific Emission Factors (1995). Assumes 21.75 working weekdays per month and daily watering of site.

Note: Construction projects below the screening level thresholds shown above are assumed to be below the **82 lb/day threshold of significance**, while projects with activity levels higher than those above may have a significant impact on air quality. Additional mitigation and analysis of the project impact may be necessary for those construction activities.

Source: Monterey Bay Unified Air Pollution Control District, 2008.

Project construction may result in a short term, localized decrease in air quality due to generation of PM_{10}. However, standard dust control best management practices (BMPs) and best available control technology (BACT) would be implemented during construction to ensure that emissions of diesel particulate matter (DPM) and fugitive dust from project excavation and grading would be consistent with MBARD emissions inventories Impacts would be less than significant.

3.	*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)?*	☐	☐	☒	☐

Discussion: Project construction would have a limited and temporary potential to contribute to existing violations of California air quality standards for ozone and PM_{10} primarily through diesel engine exhaust and fugitive dust. However, the Santa Cruz monitoring station has not had any recent violations of federal or state air quality standards mainly through dispersion of construction-related emission sources. BMPs and BACT described above under C-2 would ensure emissions remain below a level of significance. Therefore, the proposed project would not result in a cumulatively considerable net increase in criteria pollutants. The impact on ambient air quality would be less than significant.

4.	*Expose sensitive receptors to substantial pollutant concentrations?*	☐	☐	☒	☐

Discussion: The proposed residential project would not generate substantial pollutant concentrations. Emissions from construction activities represent temporary impacts that are typically short in duration. Impacts to sensitive receptors would be less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
5. *Create objectionable odors affecting a substantial number of people?*	☐	☐	☒	☐

Discussion: California ultralow sulfur diesel fuel with a maximum sulfur content of 15 ppm by weight would be used in all diesel-powered equipment, which minimizes emissions of sulfurous gases (sulfur dioxide, hydrogen sulfide, carbon disulfide, and carbonyl sulfide). The proposed project would not create ongoing or temporary objectionable odors affecting a substantial number of people; therefore, impacts are expected to be less than significant.

D. BIOLOGICAL RESOURCES

Would the project:

1. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, or U.S. Fish and Wildlife Service?*	☐	☐	☐	☒

Discussion: According to the California Natural Diversity Data Base (CNDDB), maintained by the California Department of Fish and Wildlife, there are no known special status plant or animal species in the site vicinity, and there were no special status species observed in the project area.

2. *Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations (e.g., wetland, native grassland, special forests, intertidal zone, etc.) or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*	☐	☐	☐	☒

Discussion: There are no mapped or designated riparian habitat sensitive biotic communities on or adjacent to the project site.

3. *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,*	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

filling, hydrological interruption, or other means?

Discussion: There are no mapped or designated federally protected wetlands on or adjacent to the project site. Therefore, no impacts would occur from project implementation.

4	*Interfere substantially with the movement of any native resident or migratory fish or wildlife species or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*	☐	☐	☐	☒

Discussion: The proposed project does not involve any activities that would interfere with the movements or migrations of fish or wildlife, or impede use of a known wildlife nursery site.

5.	*Conflict with any local policies or ordinances protecting biological resources (such as the Sensitive Habitat Ordinance, Riparian and Wetland Protection Ordinance, and the Significant Tree Protection Ordinance)?*	☐	☐	☐	☒

Discussion: The project would not conflict with any local policies or ordinances.

6.	*Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*	☐	☐	☐	☒

Discussion: The proposed project would not conflict with the provisions of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

7.	*Produce nighttime lighting that would substantially illuminate wildlife habitats?*	☐	☐	☐	☒

Discussion: The subject property is located in an urbanized area and is surrounded by existing residential development that currently generates nighttime lighting. There are no sensitive animal habitats within or adjacent to the project site. No impact would occur.

E. CULTURAL RESOURCES

Would the project:

1.	*Cause a substantial adverse change in the significance of a historical resource as*	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

defined in CEQA Guidelines Section 15064.5?

Discussion: The existing structures on the property are not designated as a historic resource on any federal, state or local inventory. As a result, no impacts to historical resources would occur from project implementation.

2. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?*	☐	☐	☒	☐

Discussion: No archeological resources have been identified in the project area. Pursuant to County Code Section 16.40.040, if at any time in the preparation for or process of excavating or otherwise disturbing the ground, any artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age are discovered, the responsible persons shall immediately cease and desist from all further site excavation and comply with the notification procedures given in County Code Chapter 16.40.040.

Impacts are expected to be less than significant.

3. *Disturb any human remains, including those interred outside of dedicated cemeteries?*	☐	☐	☒	☐

Discussion: Impacts are expected to be less than significant. However, pursuant to Section 16.40.040 of the Santa Cruz County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this project, human remains are discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the sheriff-coroner and the Planning Director. If the coroner determines that the remains are not of recent origin, a full archeological report shall be prepared and representatives of the local Native California Indian group shall be contacted. Disturbance shall not resume until the significance of the archeological resource is determined and appropriate mitigations to preserve the resource on the site are established.

4. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?*	☐	☐	☒	☐

Discussion: See discussion under E-2. Impacts would be less than significant.

5. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Discussion: No unique paleontological resources or unique geologic features are known to occur in the vicinity of the proposed project. No impacts are anticipated.

F. GEOLOGY AND SOILS

Would the project:

1.	*Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*				
	A. *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.*	☐	☐	☒	☐
	B. *Strong seismic ground shaking?*	☐	☐	☒	☐
	C. *Seismic-related ground failure, including liquefaction?*	☐	☐	☒	☐
	D. *Landslides?*	☐	☐	☒	☐

Discussion (A through D): The project site is located outside of the limits of the State Alquist-Priolo Special Studies Zone (County of Santa Cruz GIS Mapping, California Division of Mines and Geology, 2001). However, the project site is located approximately nine miles southwest of the San Andreas fault zone, and approximately six miles southwest of the Zayante fault zone. While the San Andreas fault is larger and considered more active, each fault is capable of generating moderate to severe ground shaking from a major earthquake. Consequently, large earthquakes can be expected in the future. The October 17, 1989 Loma Prieta earthquake (magnitude 7.1) was the second largest earthquake in central California history.

All of Santa Cruz County is subject to some hazard from earthquakes. However, the project site is not located within or adjacent to a County or state mapped fault zone, therefore the potential for ground surface rupture is low. The project site is likely to be subject to strong seismic shaking during the life of the improvements. The improvements would be designed in accordance with the California Building Code, which should reduce the hazards of

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

seismic shaking and liquefaction to a less than significant level. There is no indication that landsliding is a significant hazard at this site.

2. *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?*	☐	☐	☒	☐

Discussion: Following a review of mapped information and a field visit to the site, there is no indication that the development site is subject to a significant potential for damage caused by any of these hazards.

3. *Develop land with a slope exceeding 30%?*	☐	☐	☐	☒

Discussion: There are no slopes that exceed 30% on the property.

4. *Result in substantial soil erosion or the loss of topsoil?*	☐	☐	☒	☐

Discussion: Some potential for erosion exists during the construction phase of the project, however, this potential is minimal because the project site is relatively flat in topography and standard erosion controls are a required condition of the project. Prior to approval of a grading or building permit, the project must have an approved Erosion Control Plan (*Section 16.22.060 of the County Code*), which would specify detailed erosion and sedimentation control measures. The plan would include provisions for disturbed areas to be planted with ground cover and to be maintained to minimize surface erosion. Impacts from soil erosion or loss of topsoil would be considered less than significant.

5. *Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property?*	☐	☐	☒	☐

Discussion: The project site contains expansive soils; however, there is no indication that the development site is subject to substantial risk caused by expansive soils. The project would be conditioned to require a geotechnical report prior to issuance of a building permit for the proposed dwellings and the project shall comply with the recommendations of the geotechnical report. Therefore, impacts are anticipated to be less than significant.

6. *Have soils incapable of adequately supporting the use of septic tanks, leach fields, or alternative waste water disposal*	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

systems where sewers are not available for the disposal of waste water?

Discussion: No septic systems are proposed. The project would connect to the Santa Cruz County Sanitation District, and the applicant would be required to pay standard sewer connection and service fees that fund sanitation improvements within the district as a Condition of Approval for the project.

7. *Result in coastal cliff erosion?* ☐ ☐ ☐ ☒

Discussion: The proposed project is not located in the vicinity of a coastal cliff or bluff; and therefore, would not contribute to coastal cliff erosion. No impact is anticipated.

G. GREENHOUSE GAS EMISSIONS

Would the project:

1. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?* ☐ ☐ ☒ ☐

Discussion: The proposed project, like all development, would be responsible for an incremental increase in greenhouse gas emissions by usage of fossil fuels during the site grading and construction. Santa Cruz County has recently adopted a Climate Action Strategy (CAS) intended to establish specific emission reduction goals and necessary actions to reduce greenhouse gas levels to pre-1990 levels as required under AB 32 legislation. The strategy intends to reduce greenhouse gas emissions and energy consumption by implementing measures such as reducing vehicle miles traveled through the County and regional long range planning efforts and increasing energy efficiency in new and existing buildings and facilities. All project construction equipment would be required to comply with the Regional Air Quality Control Board emissions requirements for construction equipment. As a result, impacts associated with the temporary increase in green house gas emissions are expected to be less than significant.

The project would result in a small temporary increase in greenhouse gas emissions during construction. Permanent operational project emissions are also expected to be minimal. However, in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a determination on the project's direct impact and its contribution on the cumulative scale to climate change. Nonetheless, the County has strategies to help reduce greenhouse gas emissions and energy consumption. These measures included in the *County of Santa Cruz Climate Action Strategy* (County of Santa Cruz, 2013) are outlined below.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Strategies for the Reduction of Greenhouse Gases from Transportation

- Reduce vehicle miles traveled (VMT) through County and regional long range planning efforts.
- Increase bicycle ridership and walking through incentive programs and investment in bicycle and pedestrian infrastructure and safety programs.
- Provide infrastructure to support zero and low emissions vehicles (plug in, hybrid plug-in vehicles).
- Increase employee use of alternative commute modes: bus transit, walking, bicycling, carpooling, etc.
- Reduce County fleet emissions.

Strategies for the Reduction of Greenhouse Gases from Energy Use

- Develop a Community Choice Aggregation (CCA) Program, if feasible.
- Increase energy efficiency in new and existing buildings and facilities.
- Enhance and expand the Green Business Program.
- Increase local renewable energy generation.
- Public education about climate change and impacts of individual actions.
- Continue to improve the Green Building Program by exceeding the minimum standards of the state green building code (Cal Green).
- Form partnerships and cooperative agreements among local governments, educational institutions, nongovernmental organizations, and private businesses as a cost-effective way to facilitate mitigation and adaptation.
- Reduce energy use for water supply through water conservation strategies.

Impacts are expected to be less than significant.

2.	*Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*	☐	☐	☒	☐

Discussion: See the discussion under G-1 above. No significant impacts are anticipated.

H. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

1.	*Create a significant hazard to the public or the environment as a result of the routine*	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

transport, use or disposal of hazardous materials?

Discussion: The proposed project would not create a significant hazard to the public or the environment. No routine transport or disposal of hazardous materials is proposed. However, during construction, fuel would be used at the project site. Best management practices would be used to ensure that no impacts would occur. Impacts are expected to be less than significant.

2. *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?*	☐	☐	☒	☐

Discussion: Please see discussion under H-1 above. Project impacts would be considered less than significant.

3. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*	☐	☐	☐	☒

Discussion: The Green Acres Elementary School, located 966 Bostwick Lane and Tierra Pacifica Charter School, located at 989 Bostwick Lane are approximately 200 feet to the north of the project site. Although fueling of equipment is likely to occur within the construction staging area, BMPs to control spills would be implemented. No impacts are anticipated.

4. *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?*	☐	☐	☐	☒

Discussion: The project site is not included on the 06/07/2018 list of hazardous sites in Santa Cruz County compiled pursuant to Government Code Section 65962.5. No impacts are anticipated from project implementation.

5. *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*	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

residing or working in the project area?

Discussion: The proposed project is not located within two miles of a public airport or public use airport. No impact is anticipated.

6.	*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?*	☐	☐	☐	☒

Discussion: The proposed project is not located in the vicinity of a private airstrip. No impact is anticipated.

7.	*Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*	☐	☐	☐	☒

Discussion: The proposed project would not conflict with implementation of the County of Santa Cruz Local Hazard Mitigation Plan 2015-2020 (County of Santa Cruz, 2020). Therefore, no impacts to an adopted emergency response plan or evacuation Plan would occur from project implementation.

8.	*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?*	☐	☐	☒	☐

Discussion: The proposed project is not located in a Fire Hazard Area. However, the project design incorporates all applicable fire safety code requirements and includes fire protection devices as required by the local fire agency. Impacts would be less than significant.

I. HYDROLOGY, WATER SUPPLY, AND WATER QUALITY

Would the project:

1.	*Violate any water quality standards or waste discharge requirements?*	☐	☐	☒	☐

Discussion: The project would not discharge runoff either directly or indirectly into a public or private water supply. However, runoff from this project may contain small amounts of chemicals and other household contaminants. No commercial or industrial activities are proposed that would contribute contaminants. Potential siltation from the proposed project would be addressed through implementation of erosion control BMPs. No water quality standards or waste discharge requirements would be violated. Impacts would

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

be less than significant.

2. *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)?*	☐	☐	☒	☐

Discussion: The project would obtain water from City of Santa Cruz and would not rely on private well water. Although the project would incrementally increase water demand, the City of Santa Cruz has indicated that adequate supplies are available to serve the project (Attachment 1). The project is not located in a mapped groundwater recharge area. Impacts would be less than significant.

3. *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?*	☐	☐	☐	☒

Discussion: The proposed project is not located near any watercourses, and would not alter the existing overall drainage pattern of the site. The County Department of Public Works Drainage Section staff has reviewed and approved the proposed drainage plan. No impact would occur from project implementation.

4. *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?*	☐	☐	☒	☐

Discussion: The proposed project is not located near any watercourses, and would not alter the existing overall drainage pattern of the site or increase the rate of runoff from the site. The County Department of Public Works Drainage Section staff has reviewed and approved the proposed drainage plan. Impacts from project construction would be less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
5. *Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff?*	☐	☐	☒	☐

Discussion: Drainage calculations prepared by Hogan Land Services, dated October 13, 2017, have been reviewed for potential drainage impacts and accepted by the Department of Public Works Drainage Section staff. Staff have determined that existing storm water facilities are adequate to handle the increase in drainage associated with the project. Refer to response I-1 for discussion of urban contaminants and/or other polluting runoff. Impacts would be considered less than significant.

6. *Otherwise substantially degrade water quality?*	☐	☐	☒	☐

Discussion: Please see discussion under I-1 above. Impacts would be considered less than significant with the implementation of BMPs.

7. *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?*	☐	☐	☐	☒

Discussion: According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated May 16, 2012, the proposed development does not lie within a 100-year flood hazard area; therefore, no impact would occur.

8. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows?*	☐	☐	☐	☒

Discussion: According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map, dated May 16, 2012, no portion of the project site lies within a 100-year flood hazard area. Therefore, the proposed project would not impede or redirect flood flows. No impact would occur.

9. *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?*	☐	☐	☐	☒

Discussion: The proposed project would not increase the risk of flooding and would not lead to the failure of a levee or dam. No impact would occur.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
10. *Inundation by seiche, tsunami, or mudflow?*	☐	☐	☐	☒

Discussion: There are two primary types of tsunami vulnerability in Santa Cruz County. The first is a teletsunami or distant source tsunami from elsewhere in the Pacific Ocean. This type of tsunami is capable of causing significant destruction in Santa Cruz County. However, this type of tsunami would usually allow time for the Tsunami Warning System for the Pacific Ocean to warn threatened coastal areas in time for evacuation (County of Santa Cruz 2010).

The more higher risk to the County of Santa Cruz is a tsunami generated as the result of an earthquake along one of the many earthquake faults in the region. Even a moderate earthquake could cause a local source tsunami from submarine landsliding in Monterey Bay. A local source tsunami generated by an earthquake on any of the faults affecting Santa Cruz County would arrive just minutes after the initial shock. The lack of warning time from such a nearby event would result in higher causalities than if it were a distant tsunami (County of Santa Cruz 2010).

The project site is located approximately 1½ miles inland, approximately ½ mile beyond the effects of a tsunami. In addition, no impact from a seiche or mudflow is anticipated. No impact would occur.

J. LAND USE AND PLANNING

Would the project:

1. *Physically divide an established community?*	☐	☐	☐	☒

Discussion: The proposed project does not include any element that would physically divide an established community. No impact would occur.

2. *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?*	☐	☐	☒	☐

Discussion: The proposed project includes a variance to reduce the required 50 foot frontage and 50 foot width for newly created parcels by approximately five feet. The proposed reduction in frontage and width of parcel B would not result in an adverse impact to the environment. Further, future development of the site would be conditioned to ensure all site standards for the zone district would be met.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

The proposal includes creation of a 20-foot-wide corridor access serving as the primary access for parcel A. The Department of Public Works has reviewed the proposed development and determined that parcel A and B should be served by a common driveway in order to reduce the number of curb cuts along Rodriguez Street in the vicinity of the project. Whereas the proposed corridor access meets the requirements in terms of width to serve a single parcel (20 feet in width with an 18-foot-wide driving surface), the use of the corridor access by a second parcel triggers the need for a Residential Development Permit for creating a new right-of-way less than 40 feet in width.

Impacts are anticipated to be less than significant.

3.	*Conflict with any applicable habitat conservation plan or natural community conservation plan?*	☐	☐	☐	☒

Discussion: The proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan. No impact would occur.

K. MINERAL RESOURCES

Would the project:

1.	*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?*	☐	☐	☐	☒

Discussion: The site does not contain any known mineral resources that would be of value to the region and the residents of the state. Therefore, no impact is anticipated from project implementation.

2.	*Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*	☐	☐	☐	☒

Discussion: The project site is zoned R-1-5, which is not considered to be an Extractive Use Zone (M-3) nor does it have a land use designation with a Quarry Designation Overlay (Q) (County of Santa Cruz 1994). Therefore, no potentially significant loss of availability of a known mineral resource of locally important mineral resource recovery (extraction) site delineated on a local general plan, specific plan or other land use plan would occur as a result of this project.

L. NOISE

Would the project result in:

1.	*Exposure of persons to or generation of noise levels in excess of standards*	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

established in the local general plan or noise ordinance, or applicable standards of other agencies?

Discussion: Although construction activities would likely occur during daytime hours, noise may be audible to nearby residents. However, periods of noise exposure would be temporary. Noise from construction activity may vary substantially on a day-to-day basis, however the construction hours would be limited as a condition of approval for the land division. County Code section 8.30 further limits any offensive noise (defined as over 75db at the boundary of the property generating the noise) to the hours between 8 AM to 10 PM.

The development of new residential and commercial uses typically increases the traffic volumes in the vicinity of new development. Because traffic noise is a primary contributor to the local noise environment, any increase in traffic resulting from the development of new residential and commercial uses would be expected to proportionally increase local noise levels. The following General Plan policies are applicable to noise generation: Policy 6.9.1, Land Use Compatibility Guidelines; Policy 6.9.2, Acoustical Studies; Policy 6.9.3, Noise Sensitive Land Uses; Policy 6.9.5, Residential Development; and Policy 6.9.7, Construction Noise. The proposed project would create an incremental increase in the existing noise environment. However, this increase would be small, and would be similar in character to noise generated by the surrounding existing uses. Adherence to applicable County and/or state noise standards would ensure that potential impacts related to this issue are less than significant.

2.	*Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*	☐	☐	☒	☐

Discussion: The use of construction and grading equipment would potentially generate periodic vibration in the project area. This impact would be temporary; and therefore, is not expected to be significant.

3.	*A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*	☐	☐	☒	☐

Discussion: The proposed residential project would generate noise similar to surrounding residential properties and would not result in a permanent increase in the ambient noise level. The main source of ambient noise in the project area is traffic noise along Rodriguez Avenue. Impacts are expected to be less than significant.

4.	*A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing*	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

without the project?

Discussion: See discussion under L-1 above. Noise generated during project construction would increase the ambient noise levels in adjacent areas. Construction would be temporary, and construction hours would be limited as a condition of approval for the land division. Given the limited duration of construction and the limited hours of construction activity, this impact is considered to be less than significant.

5. *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?*	☐	☐	☐	☒

Discussion: The proposed project is not within two miles of a public airport. Therefore, the proposed project would not expose people residing or working in the project area. No impact is anticipated.

6. *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*	☐	☐	☐	☒

Discussion: The proposed project is not within two miles of a private airstrip. Therefore, the proposed project would not expose people residing or working in the project area. No impact is anticipated.

M. POPULATION AND HOUSING

Would the project:

1. *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)?*	☐	☐	☒	☐

Discussion: The proposed project is designed at the density and intensity of development allowed by the General Plan and zoning designations for the parcel. Additionally, the project does not involve extensions of utilities (e.g., water, sewer, or new road systems) into areas previously not served. Consequently, it is not expected to have a significant growth-inducing effect. Impacts would be less than significant.

2. *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

Discussion: The proposed project consists of the demolition of four-unit dwelling group that is in a dilapidated condition. The units have been unoccupied for several years. The proposed land division would result in the three parcels which are intended to be developed with new single family dwellings. The net loss in existing housing would be one unit. Impacts are anticipated to be less than significant.

3.	*Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*	☐	☐	☐	☒

Discussion: The proposed project would not displace a substantial number of people since the project is intended to divide a single unoccupied parcel into three parcels. No impact would occur.

N. PUBLIC SERVICES

Would the project:

1.	*Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:*				
	a. *Fire protection?*	☐	☐	☒	☐
	b. *Police protection?*	☐	☐	☒	☐
	c. *Schools?*	☐	☐	☒	☐
	d. *Parks?*	☐	☐	☒	☐
	e. *Other public facilities; including the maintenance of roads?*	☐	☐	☒	☐

Discussion (a through e): While the project represents an incremental contribution to the need for services, the increase would be minimal. Moreover, the project meets all of the standards and requirements identified by the local fire agency or California Department of Forestry, as applicable, and school, park, and transportation fees to be paid by the applicant would be used to offset the incremental increase in demand for school and recreational facilities and public roads. Impacts would be considered less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
O. RECREATION *Would the project:*				
1. *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?*	☐	☐	☒	☐

Discussion: The proposed project would not substantially increase the use of existing neighborhood and regional parks or other recreational facilities. Impacts would be considered less than significant.

2. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*	☐	☐	☐	☒

Discussion: The proposed project does not propose the expansion or require the construction of additional recreational facilities. No impact would occur.

P. TRANSPORTATION/TRAFFIC *Would the project:*				
1. *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?*	☐	☐	☒	☐

Discussion: The project would create a small incremental increase in traffic on nearby roads and intersections. The project is anticipated to result in one peak trip per dwelling unit. Given the small number of new trips created by the project (three peak hour trips total), the project would not result in adverse environmental impact on intersections and streets in the vicinity. Impacts would be less than significant.

2. *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other*	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

standards established by the county congestion management agency for designated roads or highways?

Discussion: In 2000, at the request of the Santa Cruz County Regional Transportation Commission (SCCRTC), the County of Santa Cruz and other local jurisdictions exercised the option to be exempt from preparation and implementation of a Congestion Management Plan (CMP) per Assembly Bill 2419. As a result, the County of Santa Cruz no longer has a CMP. The CMP statutes were initially established to create a tool for managing and reducing congestion; however, revisions to those statutes progressively eroded the effectiveness of the CMP. There is also duplication between the CMP and other transportation documents such as the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP). In addition, the goals of the CMP may be carried out through the RTIP and the RTP. Any functions of the CMP which are useful, desirable and do not already exist in other documents may be incorporated into those documents.

The proposed project would not conflict with either the goals and/or policies of the RTP or with monitoring the delivery of state and federally funded projects outlined in the RTIP. No impact would occur.

3.	*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?*	☐	☐	☐	☒

Discussion: No change in air traffic patterns would result from project implementation. Therefore, no impact is anticipated.

4.	*Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*	☐	☐	☐	☒

Discussion: The proposed development would result in two additional parcels and the construction of three single-family dwellings in a residential neighborhood. The project would take access from Rodriguez Street, which meets all County standards. Additionally, two of the lots will take access from a single driveway. No impacts would occur with project implementation.

5.	*Result in inadequate emergency access?*	☐	☐	☐	☒

Discussion: The project's road has been approved by the local fire agency or California Department of Forestry, as appropriate.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
6. *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*	☐	☐	☒	☐

Discussion: The proposed project design would comply with current road requirements to prevent potential hazards to motorists, bicyclists, and/or pedestrians. The Department of Public Works has reviewed the proposed development and recommended that the number of curb cuts along Rodriguez Street be minimized by utilizing the corridor access as the primary access for parcels A and B. Impacts are anticipated to be less than significant.

Q. TRIBAL CULTURAL RESOURCES

1. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*				
A. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources Code section 5020.1(k), or*	☐	☐	☐	☒
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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*	☐	☐	☐	☒

Discussion (A and B): The project proposes to divide an existing parcel into three parcels. Section 21080.3.1(b) of the California Public Resources Code (Assembly Bill 52) requires a lead agency formally notify a California Native American tribe that is

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

traditionally and culturally affiliated within the geographic area of the discretionary project when formally requested. As of this writing, no California Native American tribes traditionally and culturally affiliated with the Santa Cruz County region have formally requested a consultation with the County of Santa Cruz (as Lead Agency under CEQA) regarding Tribal Cultural Resources. However, no Tribal Cultural Resources are known to occur in or near the project area. Therefore, no impact to the significance of a Tribal Cultural Resource is anticipated from project implementation.

R. UTILITIES AND SERVICE SYSTEMS

Would the project:

1.	*Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*	☐	☐	☒	☐

Discussion: The proposed project's wastewater flows would not violate any wastewater treatment standards. No significant impacts would occur from project implementation.

2.	*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?*	☐	☐	☐	☒

Discussion: The project would connect to an existing municipal water supply. The City of Santa Cruz Water District has determined that adequate supplies are available to serve the project (Attachment 1). No impact would occur from project implementation.

The County of Santa Cruz Sanitation District has reviewed the project and determined municipal sewer service is available to serve the project. No impact would occur from project implementation.

3.	*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?*	☐	☐	☒	☐

Discussion: Drainage calculations prepared by Hogan Land Services, dated October 13, 2017, have been reviewed for potential drainage impacts and accepted by the Department of Public Works Drainage Section staff. Staff has determined that downstream storm facilities are adequate to handle the increase in drainage associated with the project (Attachment 2). Impacts from the proposed project are expected to be less than significant.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
4. *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*	☐	☐	☒	☐

Discussion: The City of Santa Cruz Water District has indicated that adequate water supplies are available to serve the project and has issued a will-serve letter for the proposed project, subject to the payment of fees and charges in effect at the time of service (Attachment 1). The development would also be subject to the water conservation requirements. Therefore, existing water supplies would be sufficient to serve the proposed project, and no new entitlements or expanded entitlements would be required. Impacts would be less than significant.

5. *Result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*	☐	☐	☐	☒

Discussion: The County of Santa Cruz Sanitation District has indicated that adequate capacity is available to serve the project. Please see discussion under Q-2 above. No impact would occur from project implementation.

6. *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*	☐	☐	☒	☐

Discussion: Due to the small incremental increase in solid waste generation by the proposed project during construction and operations, the impact would not be significant.

7. *Comply with federal, state, and local statutes and regulations related to solid waste?*	☐	☐	☐	☒

Discussion: The project would comply with all federal, state, and local statutes and regulations related to solid waste disposal. No impact would occur.

S. MANDATORY FINDINGS OF SIGNIFICANCE

1. *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*	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered 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?

Discussion: 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 were considered in the response to each question in Section III (A through R) of this Initial Study. As a result of this evaluation, there is no substantial evidence that, significant effects associated with this project would result. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

2. *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)?*	☐	☐	☒	☐

Discussion: In addition to project specific impacts, this evaluation considered the project's potential for incremental effects that are cumulatively considerable. As a result of this evaluation, no potentially significant cumulative impacts were identified. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

3. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*	☐	☐	☒	☐

Discussion: In the evaluation of environmental impacts in this Initial Study, the potential for adverse direct or indirect impacts to human beings were considered in the response to specific questions in Section III (A through R). As a result of this evaluation, no potentially significant adverse effects to human beings associated with this project were identified. Therefore, this project has been determined not to meet this Mandatory Finding of Significance.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

IV. REFERENCES USED IN THE COMPLETION OF THIS INITIAL STUDY

California Department of Conservation. 1980

Farmland Mapping and Monitoring Program Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance Santa Cruz County U.S. Department of Agriculture, Natural Resources Conservation Service, soil surveys for Santa Cruz County, California, August 1980.

County of Santa Cruz, 2013

County of Santa Cruz Climate Action Strategy. Approved by the Board of Supervisors on February 26, 2013.

County of Santa Cruz, 2015

County of Santa Cruz Local Hazard Mitigation Plan 2015-2020. Prepared by the County of Santa Cruz Office of Emergency Services.

County of Santa Cruz, 1994

1994 General Plan and Local Coastal Program for the County of Santa Cruz, California. Adopted by the Board of Supervisors on May 24, 1994, and certified by the California Coastal Commission on December 15, 1994.

MBUAPCD, 2008

Monterey Bay Unified Air Pollution Control District (MBUAPCD), CEQA Air Quality Guidelines. Prepared by the MBUAPCD, Adopted October 1995, Revised: February 1997, August 1998, December 1999, September 2000, September 2002, June 2004 and February 2008.

MBUAPCD, 2013a

Monterey Bay Unified Air Pollution Control District, NCCAB (NCCAB) Area Designations and Attainment Status – January 2013. Available online at http://www.mbuapcd.org/mbuapcd/pdf/Planning/Attainment_Status_January_2013_2.pdf

MBUAPCD, 2013b

Triennial Plan Revision 2009-2011. Monterey Bay Unified Air Pollution Control District. Adopted April 17, 2013.

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Attachment 1

Santa Cruz City Water – Will serve letter

Subject: RE: 1245 Rodriguez St - Water Facility Map

From: Jason Segal (jsegal@cityofsantacruz.com)

To: redesigns02@yahoo.com;

Date: Monday, August 8, 2016 3:29 PM

Hello Richard,

Please see attached SCWD Water Facility Map as requested. Below is the current water account information on the 5 existing water services.

#070-02065, 1247 Rodriguez St, account closed 12/10/13, ¾" water service (5/8" sized meter)

#070-02060, 1245 Rodriguez St, account closed 9/9/13, ¾" water service (5/8" sized meter)

#070-02062, 1245 Rodriguez St #A, account closed 6/2/08, ¾" water service off of a 1.5"x 3-3/4" multi-branched service (no meter, no credit)

#070-02061, 1245 Rodriguez St #B, account closed 2/16/05, ¾" water service off of a 1.5"x 3-3/4" multi-branched service (5/8" sized meter)

#070-02063, 1243 Rodriguez St, account closed 4/25/16, ¾" water service off of a 1.5"x 3-3/4" multi-branched service (5/8" sized meter)

So good news is that you have available Water System Development Charge credits for four (4) SFD's.

Thanks,

Jason Segal

Engineering Technician/Cross-Connection Control Specialist

City of Santa Cruz Water Department

O: (831) 420-5173 || E: jsegal@cityofsantacruz.com

Attachments

- SCWD Water Facilities Map - 1245 Rodriguez St.pdf (487.40KB)

B
24

SCWD Water Facilities Map

B
3/1

SANTA CRUZ MUNICIPAL UTILITIES

Service Installation Order

B 4/7

Date 9-26 1973 Service No. _____ SIO No 8907

Issued by Charlotte Bazik 70-2065 Account No. 345

Applicant Herman, Alson

Service Address 1247 Rodriguez

Size Service 3/4 " Meter Type _____ Size _____

Remarks Single Residence Inside City $ 100 ea

Set Meter Outside City 100 ea

Source Supply _____

Records Show: SEE FOR PROF. Paid $ 200 ea

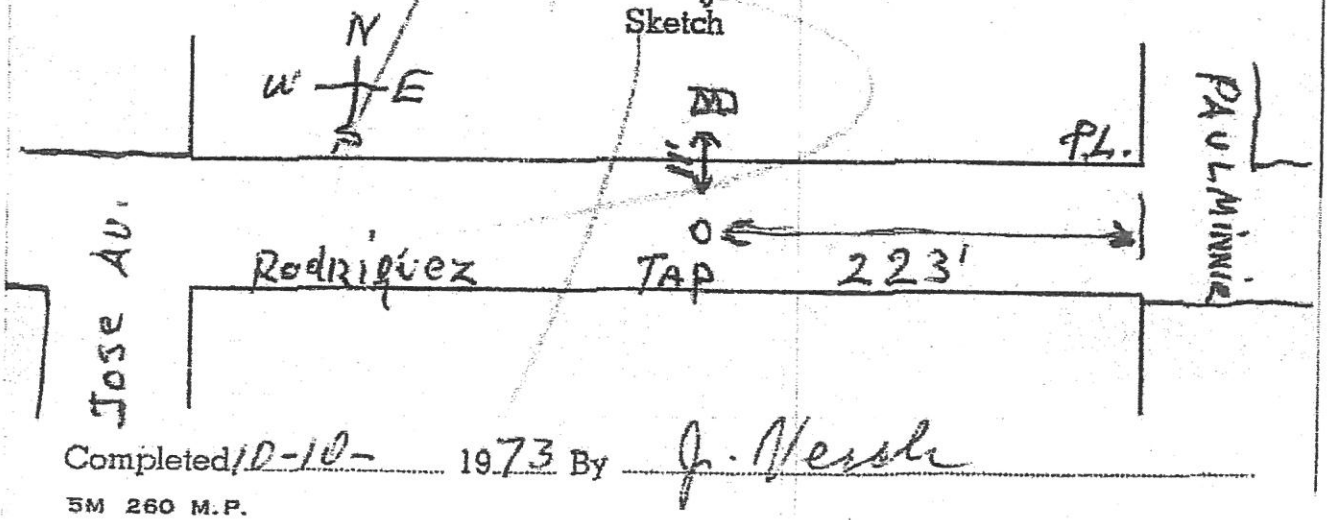
8 inch A.C. Main 32 feet deep on N side of street

FIELD REPORT

	MAKE	NUMBER	SIZE - TYPE	READING
Meter	TR-	3660840	5/8	00000
	MATERIAL	LENGTH	SIZE	SIZE TAP
Service	PLS.	13'	3/4	3/4
		MATERIAL	SIZE	DEPTH
Main Tapped		A.C.	8"	3'
		MATERIAL	SIZE OPENING	TICKET NOS.
Cut in Pavement		A.C.	8' X 3'	County 1669

Remarks Service tap is 223' W. off P.L. off Paul Minnie on Rodriguez

Sketch



Completed 10-10- 1973 By J. Nesh

5M 260 M.P.

SANTA CRUZ MUNICIPAL UTILITIES

SERVICE INSTALLATION ORDER

U.S.A. NOT. 3/16 FOR 3/20 TKT# 75917

SIO No. 13644

Date 3-15 19 90 Acct. No. 70-2061

Issued By

Applicant Don Dolan

Service Address 1245B Rodriguez

Size Service 3/4" Class RES No. Units 1

Remarks 3/4 on a manifold

Receipt No. 3227

INST. In ☐ Out ☑

Mtr. Chg. 685.83

Water Fee —

Sewer Fee —

Zone Cap Fee —

Elevation Zone ☐

Plan Review Fee —

Inspection Record:

started _____ 2nd insp. _____ 3rd Insp. _____

Records Show:

8" inch A-C Main 3'± feet deep on middle side of street Rodriguez

200' west of Paul Minnie

FIELD REPORT

LENGTH	MATERIAL	SIZE	SIZE TAP
Service 4'	COPPER	3/4	1 1/2
Main Tapped	MATERIAL	SIZE	DEPTH
	A.C	8	3+
Cut in Pavement	MATERIAL	SIZE OPENING	TICKET NOS.
	A.C.	20"	9550

Remarks Customer will mark location + CDR

Sketch

E-223

Completed 4-24 19 90 By BIRT

RV-INST 4-89

FIRE SERVICE CHECKLIST

	DATE
Gate Valve Turned On	
Angle Meter Stops Turned On and Meter Set	
Account Numbers	
Meter Book	
405 Map	
Engineering	
Customer Service	

B 5/7

SANTA CRUZ MUNICIPAL UTILITIES

SERVICE INSTALLATION ORDER

B 6/7

SIO Nº 13643

Date 3-15 19 90 Acct. No. 70-2062

Issued By

Applicant Jon Dolder

Service Address 124 S A Rodriguez

Size Service 3/4" Class res No. Units 1

Remarks 2 of 3 on a manifold

Receipt No. 3227 685683

INST. In ☐ Out ☒

Mtr. Chg. ~~24~~ 625.83

Water Fee —

Sewer Fee —

Zone Cap Fee

Elevation Zone

Plan Review Fee —

Inspection Record:

started 2nd Insp. 3rd Insp.

Records Show:

8" Inch A C Main 5'± feet deep on middle Rodriguez side of street

200' west of Paul Revere

FIELD REPORT

LENGTH	MATERIAL	SIZE	SIZE TAP
Service 14'	COPPER	3/4	1 1/2
Main Tapped	MATERIAL: A.C	SIZE: 8	DEPTH: 3+
Cut in Pavement	MATERIAL: A.C	SIZE OPENING: 2.0+	TICKET NOS.

Remarks customer will mark location

+ CDR

Sketch

PAUL REVERE

← 224 RODRIGUEZ

Completed 4-24 19 90 By

SERV-INST 4-89

FIRE SERVICE CHECKLIST

	DATE
Gate Valve Turned On	
Angle Meter Stops Turned On and Meter Set	
Account Numbers	
Meter Book	
405 Map	
Engineering	
Customer Service	

SANTA CRUZ MUNICIPAL UTILITIES

SERVICE INSTALLATION ORDER

SIO Nº 13642

B 7/7

Date 3-15 19 90 Acct. No. 90-206B

Issued By Shareen Gee

Applicant Don Dolan

Service Address 1243-1245 Rodriguez

Size Service 3/4" Class blue No. Units 1

Remarks 1 of 3 on manifold

Receipt No. 3227

INST. In ☐ Out ☒

Mtr. Chg. ++ 485.83

Water Fee —

Sewer Fee —

Zone Cap Fee —

Elevation Zone ☐

Plan Review Fee —

Inspection Record:

started _____ 2nd Insp. _____ 3rd Insp. _____

Records Show:

8" Inch A-C Main _____ feet deep on middle Rodriguez side of street 200' west of Paul Minnie

FIELD REPORT

LENGTH	MATERIAL	SIZE	SIZE TAP
Service 4'	COPPER	3/4	1 1/2
Main Tapped	MATERIAL	SIZE	DEPTH
	D.C	8	3+
Cut in Pavement	MATERIAL	SIZE OPENING	TICKET NOS.
	PC	2'0"	

Remarks Customer will mark location + COR

Sketch

Completed 4-24 19 90 By BIRT

SERV-INST 4-89

FIRE SERVICE CHECKLIST

	DATE
Gate Valve Turned On	
Angle Meter Stops Turned On and Meter Set	
Account Numbers	
Meter Book	
405 Map	
Engineering	
Customer Service	

Attachment 2

Drainage Calculations

HOGAN LAND SERVICES

CLIENT _____ JOB No. H0313

SHEET No. 1 of 9

CALC. BY: RLD DATE: 10/13/17

CHK. BY: _____ DATE: _____

PRELIMINARY DRAINAGE CALCULATIONS

PREPARED FOR
VIC FERGUSON

A.P.N. 026-063-16
APPLICATION NO. 171063
243 RODRIGUEZ ST., SANTA CRUZ

REGISTERED PROFESSIONAL ENGINEER
ROBERT L. DeWITT
No. 20,919
CIVIL
STATE OF CALIFORNIA

10-13-17
UPDATED 2-7-18

JOB NO. H0313

2/11

DPW Drainage Review:

Responses prepared 2-7-18:

We have met with Alyson Tom to review the drainage design and mitigations required for this project.

This application is for approval of the subdivision only of the property into 3 residential lots. This application does not include the designs for the future homes, which would be constructed pursuant to a building permit and subject to DPW Drainage review for the specific design. However, this application has been deemed incomplete due to lack of specific drainage design for the future homes.

To resolve this issue, we have made an assumption of the future impervious area on each of the lots and have provided schematic design for the on-site mitigation of runoff for each of the lots. The information shown on the drainage plan is intended to provide guidance to the building permit designer to meet the requirements of the County Design Criteria, Part 3.

Due to the very low infiltration rate, the requirements are shown to be met by:

1. Bioswales sized to meet the requirements of Section C.3.b.iii for the 2-yr. 2-hr. storm; and
2. Underground rock trench retention with controlled outlet to limit the runoff to the predevelopment rate for the 10-yr storm.

Completeness Comment responses:

1. The limited off-site watershed areas that contribute runoff to the site have been identified on the Sheet P-5.
2. Grading, drainage, surfacing, and mitigation information for each of the lots is beyond the scope of this application. A detail is provided for the future construction of the common driveway on Sheet P-5.
3. The Preliminary Drainage Calculations have been updated and are included with the re-submittal.

3/11

CDC Section C.2: Narrative description of pollutant generating activities.

This narrative will distinguish between the construction activities associated with the minor land division and the later activities associated with the issuance of building permits for the future homes.

A. Minor Land Division: (Tentative map and Parcel Map)
For the minor land division, the construction activities include the construction of a single new driveway apron providing access to proposed Parcels A, and the installation of the underground utility stub-outs for sewer and water connections to each of the lots. The potential specific pollutant generating activities and mitigations include:
1. Parking/ storage area maintenance: Designation of construction storage area with appropriate perimeter control for containment
2. Outdoor storage of equipment or materials: Same as above
3. Grading for access driveway apron: Dust control and straw roils around perimeter; provision of rocked entry to minimize tracking of soil on adjacent paved street.
4. Trenching for underground utility installation: Dust control and off-site disposal of excess trench spoils
5. Installation of drainage system improvements: Inlet protection measures to protect downstream drainage from excessive siltation

B. Future home construction: (Building permits after recording of the Parcel Map)
For future home construction, each home will be separately permitted and subject to review for impacts of potential pollutant generating activities. The potential specific pollutant generating activities and mitigations include:
1. Final lot grading: Dust control and perimeter containment of silt-laden runoff
2. Driveway aprons: Use of pavers or pervious concrete to minimize surface runoff
3. Underground utilities: Control of dust during construction and off-site disposal of trench spoils.
4. Drainage system: Designed to maintain pre-development runoff rates while maintaining predevelopment groundwater recharge rate.

CDC Section C.3.a: Information on project design

This project will meet the criteria for determination as a "large project", since the new impervious areas will total more than 5,000 sq. ft.

The geotechnical engineer has noted that the infiltration rate is less than 0.7 inches per hour, rendering storm water infiltration ineffective for this site. There is a new storm drain in Rodriguez Street that will serve as a discharge point for drainage from the project site. To mitigate the post-construction runoff, the runoff detention method will be used. This will be accomplished by providing storage in an underground rock trench system, constructed under a surface bio-swale. Overflows will be directed to the storm drain in Rodriquez Street.

CDC Section C.3.b: Minimization of storm water pollutants

As stated in the response to Section C.3.a., the soils on the site are not conducive to dispersion of runoff by percolation. Accordingly, the storm water mitigation will be handled by the storage detention method. The surface bio-swale would be provided to minimize impacts of storm water pollutants.

Bioswale calculation:

For Parcel A: Future impervious est. = 2,855 ft².

Per CDC Section C.3.b.iii for 0.2 in/hr intensity and 5 in/hr. max surface loading rate

Area of bioswale = 4% of imperv. area = 114 ft².

For W = 2' wide; Length = $\frac{114\ ft^2}{2}$ = 57 Ln. ft.

For W = 3' wide; L = 114/3 = 38 ft.

For Parcels B & C, future imperv. = 2,285 ft².

Area of bioswale = 4% × 2285 = 91 sq. ft.
For W = 3' wide, L = 91/3 = 31'

For driveway: Area = 12' × 115' = 1380 ft²
Area of bioswale = 4% × 1,380 = 55 ft²
L = 55/3 = 18 L.F.
USE L = 20'

Driveway detention calculation:
Area = 1380 sq. ft.
From F16 SWPM-17, vol of storage = 68 cu ft.
For 40% void space: $\frac{68}{0.40}$ = 170 cu. ft. req'd.
For A = 1380 ft²; depth = $\frac{170}{1380}$ = 0.12 ft.
Use 6" layer > 0.12 ft dr.

5/11

TYPE OF AREA	10- YEAR RUNOFF COEFFICIENTS
Rural, park, forested; agricultural	0.10 - 0.30
Low residential (Single family dwellings)	0.45 - 0.60
High residential (Multiple family dwellings)	0.65 - 0.75
Business and commercial	0.80
Industrial	0.70
Impervious	0.90

REQUIRED ANTECEDENT MOISTURE FACTORS (Ca) FOR THE RATIONAL METHOD*

Recurrence Interval (Years)	Ca
2 to 10	1.0
25	1.1
50	1.2
100	1.25

Note: Application of antecedent moisture factors (Ca) should not result in an adjusted runoff coefficient (C) exceeding a value of 1.00

*APWA Publication "Practices in Detention of Stormwater Runoff"

Rev. 11-05

FIG. SWM-1

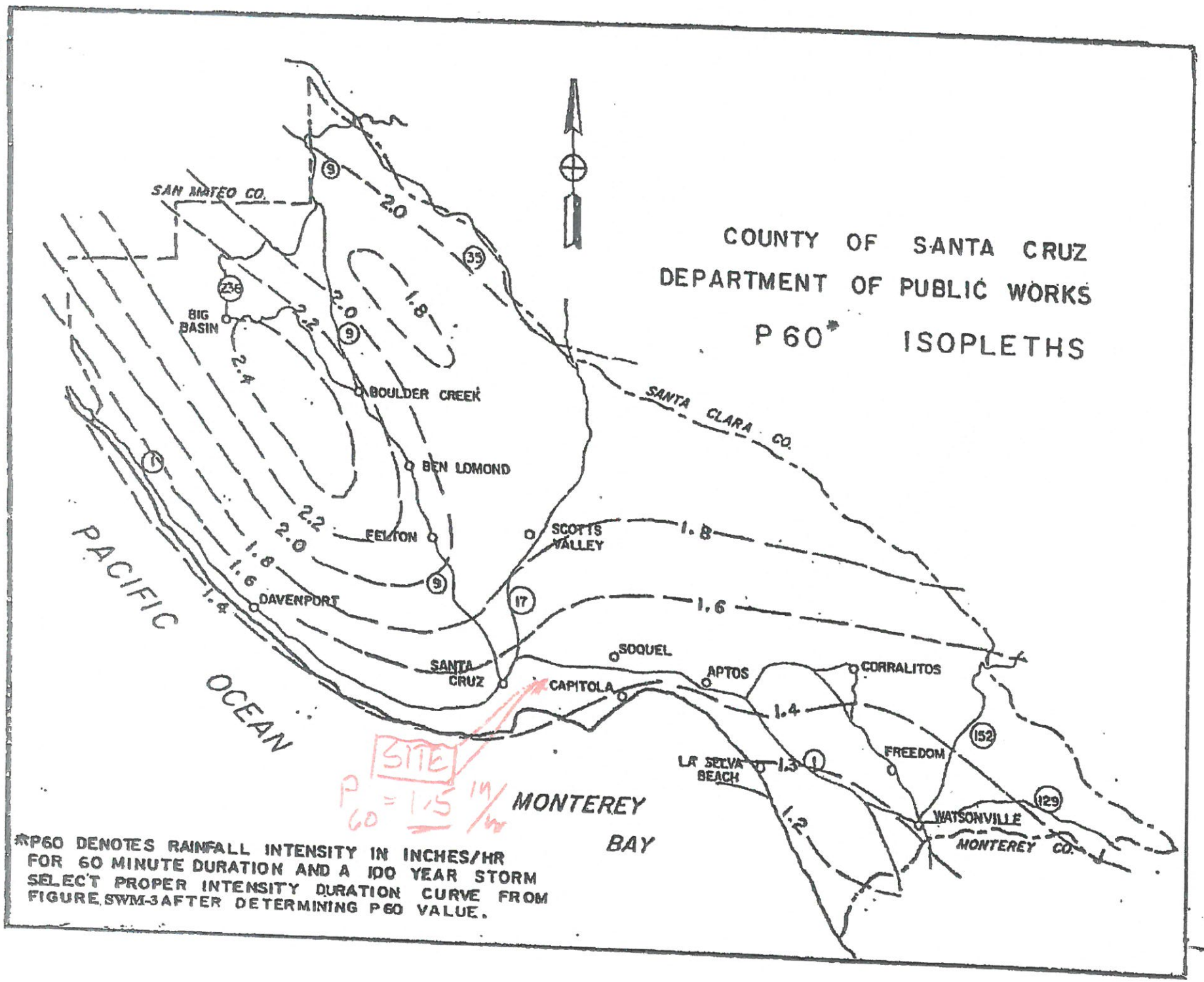
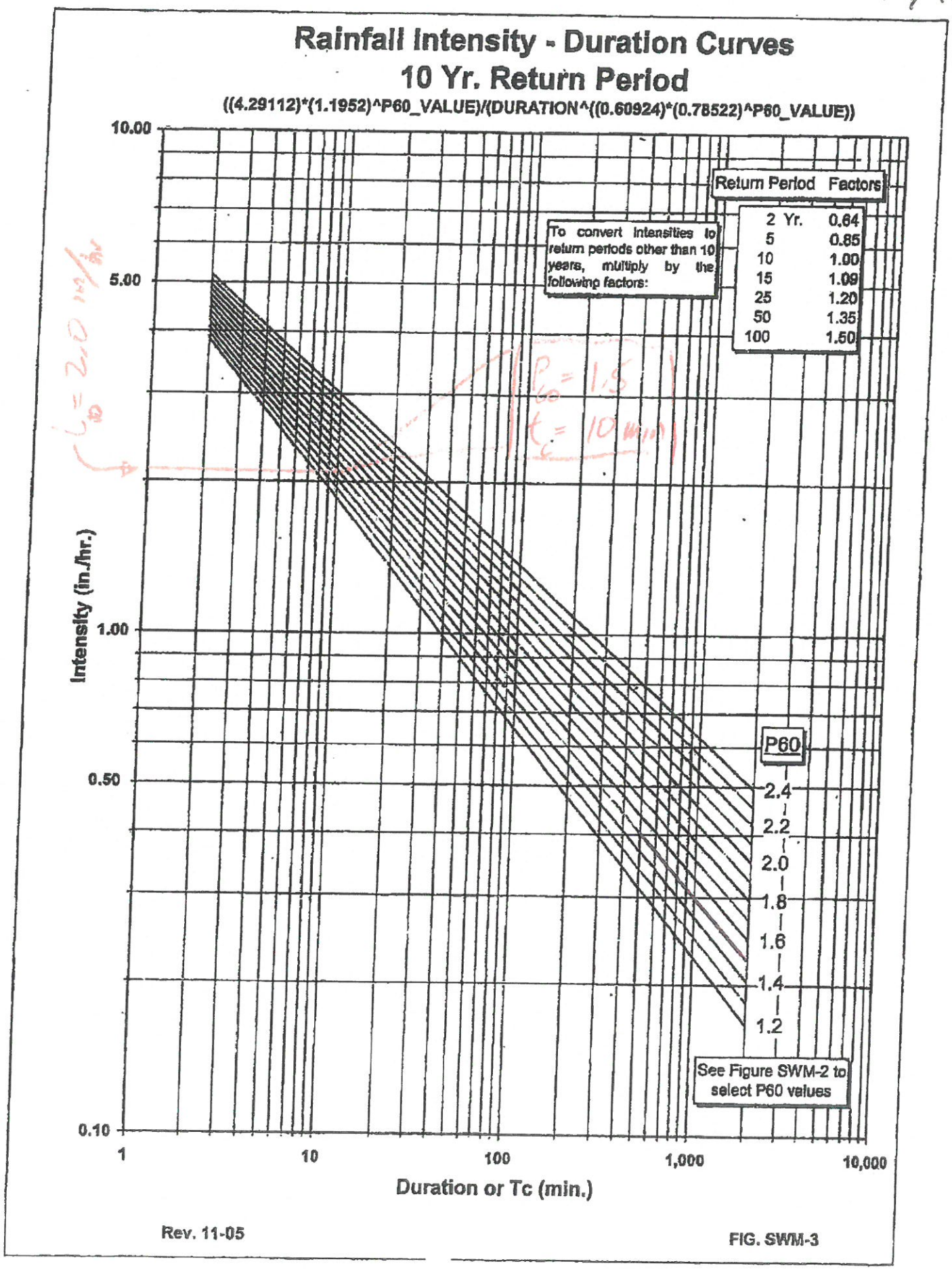

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
P 60* ISOPLETHS
SAN MATEO CO.
SANTA CLARA CO.
MONTEREY CO.
PACIFIC OCEAN
MONTEREY BAY
BIG BASIN
BOULDER CREEK
BEN LOMOND
FELTON
SCOTTS VALLEY
DAVENPORT
SANTA CRUZ
SOQUEL
APTOS
CAPITOLA
CORRALITOS
LA SELVA BEACH
FREEDOM
WATSONVILLE
1.8
2.0
2.2
2.4
1.6
1.4
1.3
1.2
SITE
P 60 = 1.5 IN/HR
*P60 DENOTES RAINFALL INTENSITY IN INCHES/HR FOR 60 MINUTE DURATION AND A 100 YEAR STORM SELECT PROPER INTENSITY DURATION CURVE FROM FIGURE SWM-3 AFTER DETERMINING P60 VALUE.

FIG. SWM-2



Rev. 11-05

FIG. SWM-3

Preliminary Calculation for future homes.

The MLD application is for lot division only. However, the DPW Stormwater Management Division requires an analysis for future build-out.

For study purposes, we have used the preliminary designs by Richard Emigh:

Lot A (Rear Lot):
Building footprint = 2,355 ft²
(incl. garage)
+ conc. apron 20'x20' = 400 ft²
+ patio (est. 10'x10') 100 ft²
Total . . . 2,855 ft² impervious

From Fig SWM17 for Parcel A:
Req'd detention storage = 136 ft³

Common D/W: To be constructed with pavers over gravel base to be self-mitigating.

Lot B:
Bldg footprint = 1,735 ft²
+ conc. apron 400
+ patio 100
Total . . 2,235 ft² impervious

Lot C:
Same as B

From Fig SWM17 for Pcl B:
Req'd detention storage = 109 ft³

HOGAN LAND SERVICES

CLIENT _____ JOB No. _____

SHEET No. 1 of 9 9/11

CALC. BY: _____ DATE: _____

CHK. BY: _____ DATE: _____

Rock trench sizing:

Lot A: 136 ft³ req'd:
For 40% void space, trench vol = $\frac{136}{0.4}$ = 340 ft³

Trial size: 60 LF × 3' wide × 2' deep = 360 ft³ ok.

Lot B: 109 ft³ req'd
For 40% void space, trench vol = $\frac{109}{0.4}$ = 273 ft³

Trial size: 45 LF × 3' wide × 2' Deep = 270 ft³ ok

Lot C: Same as Lot B

PROJECT: FERGUSON FUTURE PC'L A **Calc by:** rld **Date:** 6/21/2017

RUNOFF DETENTION BY THE MODIFIED RATIONAL METHOD

Data Entry: PRESS TAB & ENTER DESIGN VALUES SS Ver: 1.0

Site Location P60 Isopleth:	1.50		Fig. SWM-2 in County Design Criteria
Rational Coefficients Cpre:	0.25		See note # 2
Cpost:	0.90		See note # 2
Impervious Area:	2855	ft^2	See note # 2 and # 4

STRUCTURE DIMENSIONS FOR DETENTION

136 ft^3 storage volume calculated

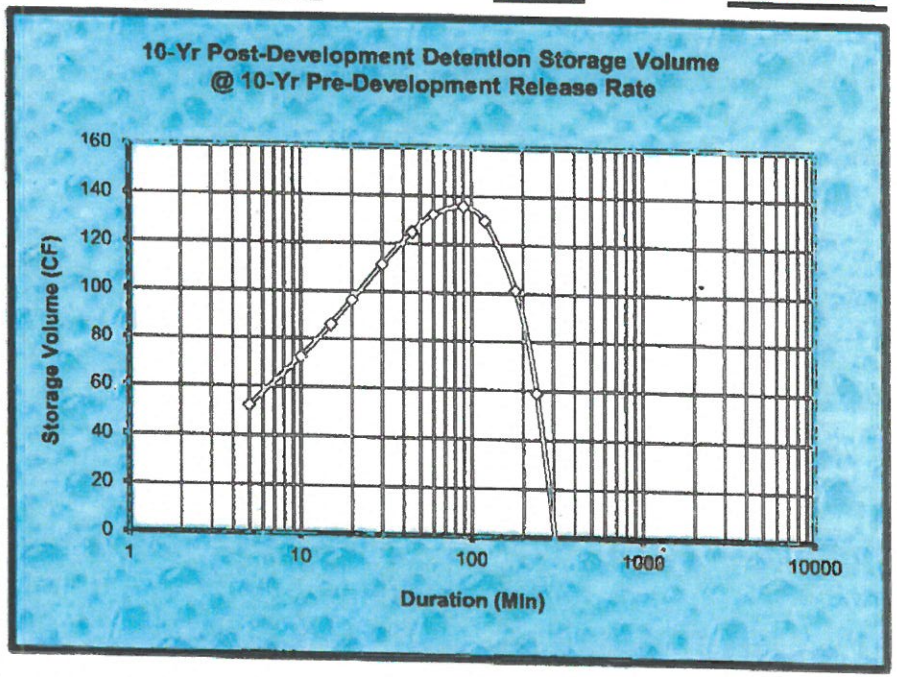
100 % void space assumed

136 ft^3 excavated volume needed

Structure	Length	Width*	Depth*
Ratios	30.00	1.50	3.00
Dimen. (ft)	**30.06**	**1.50**	**3.01**

*For pipe, use the square root of the sectional area

10 - YEAR DESIGN STORM				DETENTION @ 15 MIN.	
Storm Duration (min)	10 - Year Intensity (in/hr)	10 - Yr. Release Qpre (cfs)	10 - Year Qpost (cfs)	Detention Rate To Storage (cfs)	Specified Storage Volume (cf)
1440	0.26	0.004	0.015	-0.014	-1524
1200	0.28	0.005	0.017	-0.013	-1159
960	0.31	0.005	0.018	-0.011	-809
720	0.34	0.006	0.021	-0.009	-480
480	0.41	0.007	0.024	-0.005	-182
360	0.46	0.008	0.028	-0.002	-51
240	0.55	0.009	0.033	0.003	59
180	0.62	0.010	0.037	0.008	101
120	0.74	0.012	0.044	0.014	130
90	0.83	0.014	0.050	0.020	**136**
60	0.99	0.016	0.059	0.029	132
45	1.12	0.018	0.066	0.037	125
30	1.33	0.022	0.079	0.049	111
20	1.57	0.026	0.094	0.064	96
15	1.78	**0.029**	0.106	0.076	86
10	2.11	0.035	0.126	0.096	72
5	2.83	0.047	0.169	0.139	52



Notes & Limitations on Use:

1) The modified rational method, and therefore the standard calculations are applicable in watersheds up to 20 acres in size.
2) Required detention volume determinations shall be based on all net new impervious area both on and off-site, resulting from the proposed project. Pervious areas shall not be included in detention volume sizing; an exception may be made for incidental pervious areas less than 10% of the total area.
3) Gravel packed detention chambers shall specify on the plans, aggregate that is washed, angular, and uniformly graded (of single size), assuring void space not less than 35%.
4) A map showing boundaries of both regulated impervious areas and actual drainage areas routed to the hydraulic control structure of the detention facility is to be provided, clearly distinguishing between the two areas, and noting the square footage.
5) The EPA defines a class V injection well as any bored, drilled, or driven shaft, or dug hole that is deeper than its widest surface dimension, or an improved sinkhole, or a subsurface fluid distribution system. Such storm water drainage wells are "authorized by rule". For more information on these rules, contact the EPA. A web site link is provided from the County DPW Stormwater Management web page.
6) Refer to the County of Santa Cruz Design Criteria, for complete method criteria.

PROJECT: FERGUSON FUTURE PC'L B AND PC'L C **Calc by:** rld **Date:** 6/21/2017

RUNOFF DETENTION BY THE MODIFIED RATIONAL METHOD

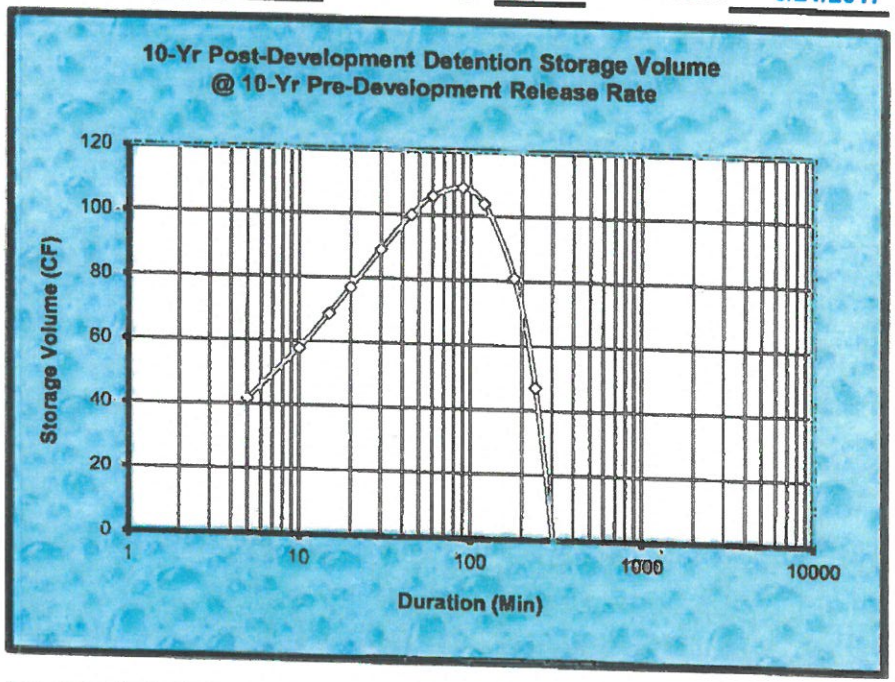
Data Entry: PRESS TAB & ENTER DESIGN VALUES SS Ver: 1.0

Site Location P60 Isopleth:	1.50		Fig. SWM-2 in County Design Criteria
Rational Coefficients Cpre:	0.25		See note # 2
Cpost:	0.90		See note # 2
Impervious Area:	2285	ft^2	See note # 2 and # 4

STRUCTURE DIMENSIONS FOR DETENTION

109	ft^3 storage volume calculated			
100	% void space assumed			
109	ft^3 excavated volume needed			
Structure Ratios	Length	Width*	Depth*	*For pipe, use the square root of the sectional area
Dimen. (ft)	27.91	1.40	2.79	

10 - YEAR DESIGN STORM				DETENTION @ 15 MIN.	
Storm Duration (min)	10 - Year Intensity (in/hr)	10 - Yr. Release Qpre (cfs)	10 - Year Qpost (cfs)	Detention Rate To Storage (cfs)	Specified Storage Volume (cf)
1440	0.26	0.003	0.012	-0.011	-1220
1200	0.28	0.004	0.013	-0.010	-928
960	0.31	0.004	0.015	-0.009	-648
720	0.34	0.005	0.016	-0.007	-384
480	0.41	0.005	0.019	-0.004	-145
360	0.46	0.006	0.022	-0.002	-41
240	0.55	0.007	0.026	0.003	47
180	0.62	0.008	0.030	0.006	81
120	0.74	0.010	0.035	0.012	104
90	0.83	0.011	0.040	0.016	109
60	0.99	0.013	0.047	0.024	106
45	1.12	0.015	0.053	0.030	100
30	1.33	0.018	0.063	0.040	89
20	1.57	0.021	0.075	0.051	77
15	1.78	0.024	0.085	0.061	69
10	2.11	0.028	0.101	0.077	58
5	2.83	0.037	0.135	0.111	42



Notes & Limitations on Use:

1) The modified rational method, and therefore the standard calculations are applicable in watersheds up to 20 acres in size.
2) Required detention volume determinations shall be based on all net new impervious area both on and off-site, resulting from the proposed project. Pervious areas shall not be included in detention volume sizing; an exception may be made for incidental pervious areas less than 10% of the total area.
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6) Refer to the County of Santa Cruz Design Criteria, for complete method criteria.

Attachment 3

Geotechnical (Soils) Investigation

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

Soils (Geotechnical) Engineer Plan Review Form

Project Information:

Application Number:
Parcel # (APN): 026-063-16
Owner Name: Victor and Lisa Ferguson
Project Address / Location: 1243 Rodriguez Street, Santa Cruz

Soils Report Information:

Soils Engineering Company Name: Dees & Associates, Inc.
Name of Soils Engineer Who Signed Report: Rebecca L Dees
Date of Soils Report: April 14, 2017
Date of Updates / Supplemental Info:

Project Plan Sheets Reviewed:

Plan Sheet Number	Plan Prepared By	Date of Latest Revision
P-0, P-1, P-2, P-3, P-5	Hogan Land Services	6-21-17

The plans sheets listed above for the specified project are in conformance with the recommendations of the soils report.

REGISTERED PROFESSIONAL ENGINEER
REBECCA LYNN DEES
GE-2623
EXPIRES: 12/17
GEOTECHNICAL
STATE OF CALIFORNIA

Soils Engineer's Signature and Stamp

October 18, 2017
Date

Dees & Associates, Inc.
Geotechnical Engineers
501 Mission Street, Suite 8A Santa Cruz, CA 95060 Phone (831) 427-1770 Fax (831) 427-1794

May 9, 2017 Project No. SCR-1114

VICTOR AND LISA FERGUSON
4180 Pearson Court
Capitola, California 95010

Subject: Addendum to Geotechnical Investigation

Reference: Proposed Three Lot Minor Land Division and Three New Single Family Residences
1243, 1245, and 1247 Rodriguez Street
APN 026-063-16
Santa Cruz County, California

Dear Mr. and Mrs. Ferguson:

We found an error in our calculations for the pavement design. The pavement design should be at least 3 inches of asphalt over 10 inches of Class 2 baserock.

We're sorry for any inconvenience this may have caused you.

Very truly yours,

DEES & ASSOCIATES, INC.

Rebecca L. Dees
Geotechnical Engineer
G.E. 2623

Copies: 4 to Addressee

GEOTECHNICAL INVESTIGATION
For
PROPOSED THREE LOT MINOR LAND DIVISION
1243 Rodriguez Street
APN 026-063-16
Santa Cruz County, California

Prepared
For
VICTOR AND LISA FERGUSON
Capitola, California

Prepared By
DEES & ASSOCIATES, INC.
Geotechnical Engineers
Project No. SCR-1114
APRIL 2017

Dees & Associates, Inc.
Geotechnical Engineers
501 Mission Street, Suite 8A Santa Cruz, CA 95060 Phone (831) 427-1770 Fax (831) 427-1794

April 14, 2017 Project No. SCR-1114

VICTOR AND LISA FERGUSON
4190 Pearson Court
Capitola, California 95010

Subject: Geotechnical Investigation

Reference: Proposed Three Lot Minor Land Division
1243, 1245 and 1248 Rodriguez Street
APN 026-063-16
Santa Cruz County, California

Dear Mr. and Mrs. Ferguson:

As requested, we have completed a Geotechnical Investigation for the three lot minor land division proposed at the referenced site. The four existing residences will be removed and three new single family residences will be constructed at each new homesite.

The purpose of our investigation was to evaluate the soil conditions in the vicinity of the proposed improvements and provide geotechnical recommendations and criteria for their design and construction. This report presents the results, conclusions and recommendations of our investigation.

Very truly yours,

DEES & ASSOCIATES, INC.

Rebecca L. Dees
Geotechnical Engineer
G.E. 2623

Copies: 4 to Addressee

TABLE OF CONTENTS

GEOTECHNICAL INVESTIGATION

Introduction

This report presents the results of our Geotechnical Investigation for the three lot minor land division and three new single family residences proposed at 1243, 1245 and 1248 Rodriguez Street in Santa Cruz, California. See Figure 1.

Purpose and Scope

The purpose of our investigation was to explore and evaluate surface and near surface soil conditions at the site and provide geotechnical recommendations for design and construction of the proposed improvements.

The specific scope of our services was as follows:

1. Site reconnaissance and review of available data in our files pertinent to the site and vicinity.

2. Exploration of subsurface conditions consisting of logging and sampling of three (3) exploratory test borings terminated between 20 and 30 feet beneath the ground surface.

3. Laboratory testing to evaluate the engineering properties of the subsoils.

4. Engineering analysis and evaluation of the resulting field and laboratory test data. Based on our findings, we have developed geotechnical design criteria for general site grading, foundations, concrete slabs-on-grade, pavements and general site drainage.

5. Preparation of this report presenting the results of our investigation.

Project Location and Description

The site is located on the north side of Rodriguez Street near the cross-street of Paul Minnie Avenue in Santa Cruz, California, Figure 1. The 0.5 acre, roughly rectangular parcel is bordered by Rodriguez Street to the south and residential parcels to the west, north, and east. The site vicinity and parcel are nearly level with a slight slope to the southwest.

The site is currently developed with four residential structures and related improvements. We understand the existing structures and improvements will be removed, the parcel will be sub-divided into three parcels, then new single family residences will be constructed on each of the parcels. Two parcels will front Rodriguez Street and one lot will be a flag lot. See Figure 2.

Field Investigation

Subsurface conditions at the site were explored on January 26, 2017 with three (3)

exploratory borings drilled with 6-inch diameter continuous flight auger equipment advanced with tractor mounted drilling equipment. Our borings were drilled to depths of 30, 28, and 20 feet. The approximate locations of our borings are indicated on our Site Plan, Figure 2.

The soils observed in the test borings were logged in the field and described in accordance with the Unified Soil Classification System (D2487 and D2488), Figure 3. The Test Boring Logs, Figures 4 through 6, denote subsurface conditions at the locations and times observed, and they are not warranted they are representative of subsurface conditions at other locations or times.

Representative soil samples were obtained from the exploratory borings at selected depths, or at major strata changes. These samples were recovered using the 3.0-inch O.D. Modified California Sampler (L), 2.5-inch California Sampler (M), or the Standard Terzaghi Sampler (T). The penetration resistance blow counts for the (L), (M), and (T) noted on the boring logs were obtained as the sampler was dynamically driven into the in situ soil. The process was performed by dropping a 140-pound hammer a 30-inch free fall distance and driving the sampler 6 to 18 inches and recording the number of blows for each 6-inch penetration interval. The blows recorded on the boring logs present the accumulated number of blows that were required to drive the last 12 inches. The blow counts for the large and medium samples indicated on the logs have been converted to equivalent standard field penetration test (SPT) values.

Laboratory Testing

The laboratory testing program was directed toward a determination of the physical and engineering properties of the soils underlying the site. Moisture content and dry densities were performed on representative soil samples to determine the consistency of the soil and the moisture variation throughout the explored soil profile. Atterberg Limit tests were performed to aid in soil classification and to evaluate the shrink swell potential of the foundation zone soil. Grain size analysis was performed to further aid in soil classification. The results of our field and laboratory testing appear on the "Log of Test Boring", opposite the sample tested.

Subsurface Soil Conditions

The Santa Cruz County Geologic Map indicates the site is underlain by Lowest Emergent Coastal Terrace Deposits (Pleistocene), which is described as "semiconsolidated, generally well-sorted sand with a few thin, relatively continuous layers of gravel. Deposited in nearshore high-energy marine environment. Grades upward into eolian deposits of Manresa Beach in southern part of the county. Thickness variable; maximum approximately 40 ft. Unit thins to north where it ranges from 5 to 20 ft thick. Weathered zone ranges from 5 to 20 ft thick. As mapped, locally includes many small areas of fluvial and colluvial silt, sand and gravel, especially at or near old wave-cut cliffs."

Our exploratory borings encountered lean sandy clay over clayey and silty sands over sand. The sandy clays were 4 to 6 feet deep in Borings 1 and 2 and 15 feet deep in Boring 3. The clayey soils were firm to stiff, the clayey and silty sands were medium dense to dense and the sand was dense to very dense.

The soils below the site are classified as a Site Class "D" for analysis using the 2016 California Building Code.

Groundwater

Perched groundwater was encountered in Borings 1 and 2, 12 to 18 inches below grade and groundwater was encountered 14 and 16.5 feet below grade. Groundwater was not encountered in Boring 3. Groundwater levels denote groundwater conditions at the locations and times observed, and it is not warranted that they are representative of groundwater conditions at other locations or times. Groundwater levels can vary due to seasonal variations and other factors not evident at the time of our investigation.

Seismicity

The following is a general discussion of seismicity in the project area. A detailed discussion of seismicity is beyond the scope of our services.

The closest faults to the site are the Zayante-Vergeles Fault, the offshore Monterey Bay-Tularcitos Fault, the San Andreas Fault, and the offshore San Gregorio Fault. The San Andreas Fault is the largest and most active of the faults in the site vicinity. However, each fault is considered capable of generating moderate to severe ground shaking. It is reasonable to assume that the proposed development will be subject to at least one moderate to severe earthquake from one of the faults during the next fifty years.

Zayante-Vergeles Fault Zone	Monterey-Bay Tularcitos Fault Zone	San Andreas Fault Zone	San Gregorio Fault Zone
7.1 miles Northeast	8.7 miles Southwest	9.2 miles northeast	12.9 miles southwest

Structures designed according to the 2016 California Building Code may use the following parameters in their analysis. The following ground motion parameters may be used in seismic design and were determined using the USGS Seismic Design Map and ASCE 7-10.

Ss	S1	SMs	SM1	SDs	SD1
1.500g	0.600g	1.500g	0.900g	1.000g	0.600g

PGAm	0.50g

Seismic Design Category (SDC) Occupancy Categories I and II	D

Liquefaction

Liquefaction occurs when saturated fine grained sands, silts and sensitive clays are subject to shaking during an earthquake and the water pressure within the pores builds up leading to loss of strength. There is a low potential for liquefaction to develop below the groundwater table due to the density of the soils below the groundwater table.

Landsliding

The site is very gently sloping and there are no steep slopes near the project site; therefore, there is a very low potential for landslides to affect the proposed improvements.

DISCUSSIONS AND CONCLUSIONS

Based on the results of our investigation, the proposed three lot land division and the three new residences proposed at the site are feasible provided the recommendations presented in this report are incorporated into the design and properly followed during construction of the project.

Primary geotechnical concerns for the project include embedding foundations into firm, uniform soil, controlling groundwater and drainage, and designing for strong seismic shaking.

Differential settlement of the upper loose soils could also occur under building loads because the top 12 to 30 inches of soil is soft when wet and there will be areas with loose soils and fill after the existing structures are demolished. Foundations should penetrate the loose soils and be founded upon firm native soil.

Perched groundwater was encountered 12 to 18 inches below grade in Borings 1 and 2. If construction is performed during times of high groundwater, it may be necessary to de-water and dry the soil before excavations can be performed. If construction is performed in the drier summer months the probability of encountering perched groundwater is reduced, but some deeper groundwater (below 14 feet) should be anticipated even during the dry months.

Due to the potential for shallow groundwater and ponding water, we recommend raising the grade at each residence and sloping the ground surface away from the foundations. We do not recommend having crawlspaces that are lower than the exterior grade and we recommend keeping floor space above the exterior grade.

Roof and surface runoff should be directed away from building foundations. There is a potential for water to pond at the site due to the clay at the ground surface and the near level topography. As recommended above, the buildings should be raised above existing grade to create slopes away from each residence. Swales should be used where necessary to direct surface runoff around each residence to a suitable collection point. Due to clayey surface soils and high groundwater the site is not suitable for on-site retention. The NRCS web soil survey indicates the near surface soils have infiltration rates less than 0.7 inches per hour which is too slow to handle storm water infiltration. Bio-swales and other retention type facilities may be used on site as long as a suitable overflow path is available for excess water. In general, bio-swales should not be located within 10 feet of foundations.

The site is located in a highly seismic region near several major fault zones. The proposed structure will most likely experience strong seismic shaking during the design lifetime. The foundation and structures should be designed utilizing the most current seismic design standards.

RECOMMENDATIONS

The following recommendations should be used as guidelines for preparing project plans and specifications:

General Site Grading

1. The geotechnical engineer should be notified **at least four days** prior to any grading or foundation excavating so the work in the field can be coordinated with the grading contractor and arrangements for testing and observation can be made. The recommendations of this report are based on the assumption that the geotechnical engineer will perform the required testing and observation during grading and construction. It is the owner's responsibility to make the necessary arrangements for these required services.

2. Areas to be graded should be cleared of all obstructions including existing foundations and slabs, vegetation and root laden topsoil, and any other unsuitable material. Stripping depths of 3 to 4 inches are anticipated. Voids should be backfilled with engineered fill.

3. The top 12 inches of subgrade soil should be scarified, moisture conditioned and compacted below areas to receive engineered fill. At the time of our study, moisture contents of the surface and near-surface native soils ranged from about 15 percent to 19 percent. Based on these moisture contents, some moisture conditioning will likely be needed for the project. The soils moisture contents may need to be dried by aeration to achieve the recommended moisture content range for compaction.

4. Engineered fill should be moisture conditioned to about 2 percent over optimum moisture content, placed in thin lifts less than 8-inches in loose thickness and compacted to at least 90 percent relative compaction. Where referenced in this report, Percent Relative Compaction and Optimum Moisture Content shall be based on ASTM Test Designation D1557.

5. In general, the on-site soils are suitable for use as engineered fill. Soils used for engineered fill should be granular, have a Plasticity Index less than 15, be free of organic material, and contain no rocks or clods greater than 6 inches in diameter, with no more than 15 percent larger than 4 inches.

6. Fill slopes should be benched at least 2 feet below existing grade. The bench should be at least 6 feet wide. Fill slopes should be inclined no steeper than 2:1 (horizontal to vertical).

7. Engineered fill should be continuously observed by our firm. At a minimum, in-place density tests should be performed as follows: one test for every foot of fill placed, one test for every 500 sq. ft. of material for relatively thin fill sections and one test whenever

there is a definite suspicion of a change in the quality of moisture control or effectiveness in compaction.

8. After the earthwork operations have been completed and the geotechnical engineer has finished his observation of the work, no further earthwork operations shall be performed except with the approval of and under the observation of the geotechnical engineer.

Earthwork Considerations

9. Although the exposed subgrades are anticipated to be relatively stable upon initial exposure, on site soils may pump and unstable subgrade conditions could develop during general construction operations, particularly if the soils are wetted and/or subjected to repetitive construction traffic. The use of light construction equipment would aid in reducing subgrade disturbance. Should unstable subgrade conditions develop stabilization measures will need to be employed.

10. We recommend that the earthwork portion of this project be completed during extended periods of dry weather if possible. If earthwork is completed during the wet season (typically October through May) it may be necessary to take extra precautionary measures to protect subgrade soils. Wet season earthwork may require additional mitigation beyond that which would be expected during the drier summer and fall months.

Concrete Slabs-on-Grade

11. The upper 12 inches of subgrade soil below interior concrete slabs-on-grade should be moisture conditioned to 1 to 2 percent over optimum moisture content and compacted to at least 90 percent relative compaction.

12. The upper 8 inches of subgrade soil below non-load bearing exterior concrete slabs-on-grade should be moisture conditioned to 1 to 2 percent over optimum moisture content and compacted to at least 90 percent relative compaction.

13. For driveway slabs the upper 12 inches of subgrade soil should be moisture conditioned to 1 to 2 percent over optimum moisture content and compacted to at least 95 percent relative compaction. The zone of compaction should extend at least 1 foot beyond the edges of the slab.

14. Upon completion of grading, care should be taken to maintain the subgrade prior to construction of the slabs. Construction traffic over the completed subgrade should be avoided to the extent practical. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and re-compacted prior to slab construction.

15. All concrete slabs-on-grade can be expected to suffer some cracking and movement. However, thickened exterior edges, a well prepared subgrade including pre-

moistening prior to pouring concrete, adequately spaced expansion joints and good workmanship should reduce cracking and movement.

16. Dees & Associates, Inc. are not experts in the field of moisture proofing and vapor barriers. In areas where floor wetness would be undesirable, an expert, experienced with moisture transmission and vapor barriers should be consulted. At a minimum, a blanket of 6 inches of free-draining gravel should be placed beneath interior floor slabs to act as a capillary break. In order to minimize vapor transmission, an impermeable membrane should be placed over the gravel.

Pavements

17. The top 12 inches of subgrade soil below pavements should be moisture conditioned to 1 to 2 percent over optimum moisture content and compacted to at least 95 percent relative compaction.

18. Upon completion of grading, care should be taken to maintain the subgrade moisture content prior to construction of pavements. Construction traffic over the completed subgrade should be avoided to the extent practical.

19. The site should also be graded to prevent ponding of surface water on the prepared subgrades. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and re-compacted prior to pavement construction.

20. The pavement section should consist of at least 3 inches of asphalt concrete over at least 8 inches of Class II aggregate base, or as specified by your designer.

21. The aggregate base below all Portland cement or asphalt concrete pavements should be moisture conditioned and compacted to at least 95 percent relative compaction prior to placing concrete or asphalt paving materials.

22. Only quality materials of the type and minimum thickness specified should be used. Baserock (R=78 minimum) should meet CalTrans Standard Specifications for Class II Untreated Aggregate Base. Subbase (R=50 minimum) if specified should meet CalTrans Standard Specifications for Class II Untreated Aggregate Subbase.

Utility Trenches

23. Utility trenches placed parallel to structures should not extend within an imaginary 2:1 (horizontal to vertical) plane projected downward from the bottom edge of the adjacent footing.

24. Trenches may be backfilled with compacted engineered fill placed in accordance with the grading section of this report. The backfill material should not be jetted in place.

25. The portion of utility trenches that extend beneath foundations should be sealed with 2-sack sand slurry (or equivalent) to prevent subsurface seepage from flowing under buildings.

Spread Footing Foundations

26. Footings may be founded upon firm native soil. Firm native soil was encountered 12 to 30 inches below existing grades. We recommend raising the grade at each homesite for drainage. Therefore, footings could be about 2 to 3.5 feet deep to penetrate the proposed fill and penetrate the upper loose soils. As an alternative, the top 12 to 30 inches of soil can be removed and replaced as compacted engineered fill and footings can be embedded a minimum of 12 inches into the engineered fill. Footings supported on engineered fill should have at least 12 inches of engineered fill below the foundation and the fill should extend at least 3 feet beyond the perimeter of the structure.

27. Footings should be at least 12 inches wide for one story footings and at least 15 inches wide for two story footings. Actual footing depths and widths may be larger and should be as required by the structural designer based on the actual loads transmitted to the foundation and applicable design standards.

28. Footings designed in accordance with the above may be designed for an allowable soil bearing pressure of 1,800 psf for dead plus live loads. This value may be increased by one-third to include short-term seismic and wind loads.

29. Footings located adjacent to other footings or utility trenches should have their bearing surfaces founded below an imaginary 2:1 plane projected upward from the bottom edge of the adjacent footings or utility trenches.

30. Total and differential settlements from foundation loads are anticipated to be on the order of 1 inch and 1/2 inches respectively.

31. Lateral load resistance for structures supported on shallow footings may be developed in friction between the foundation bottom and the supporting subgrade. A friction coefficient of 0.35 may be assumed. As an alternative, where foundations are poured neat against engineered fill, an allowable lateral bearing pressure of 200 pcf, equivalent fluid weight may be used. The top 12 inches of soil should be neglected in passive design.

32. The foundation trenches should be kept moist and be thoroughly cleaned of slough or loose materials prior to pouring concrete.

33. Prior to placing concrete, foundation excavations should be observed by the soils engineer.

Site Drainage

34. Controlling surface and subsurface runoff is important to the performance of the project.

35. Surface drainage should include provisions for positive gradients so that surface runoff is not permitted to pond adjacent to foundations or other improvements. Where bare soil or pervious surfaces are located next to the foundation, the ground surface within 10 feet of the structure should be sloped at least 5 percent away from the foundation. Where impervious surfaces are used within 10 feet of the foundation, the impervious surface within 10 feet of the structure should be sloped at least 2 percent away from the foundation. Swales should be used to collect and remove surface runoff where the ground cannot be sloped the full 10 foot width away from the structure. Swales should be sloped at least 2 percent towards the discharge point.

36. There is a potential for water to pond at the site due to clayey soils at the ground surface and the near level topography. Buildings should be raised above existing grade to create slopes away from each residence. Swales should be used where necessary to direct surface runoff around each residence to a suitable collection point.

37. Full roof gutters should be placed around the eves of the structure. Discharge from the roof gutters should be conveyed away from the downspouts and discharged in a controlled manner.

38. Due to clayey surface soils and high groundwater the site is not suitable for on-site retention. The NRCS web soil survey indicates the near surface soils have infiltration rates less than 0.7 inches per hour which is too slow to handle storm water infiltration.

39. Bio-swales and other retention type facilities may be used on site as long as a suitable overflow path is available for excess water. In general, bio-swales should not be located within 10 feet of foundations.

40. The location of all drainage outlets should be reviewed and approved in the field prior to installation.

Plan Review, Construction Observation, and Testing

41. Dees & Associates, Inc. should be provided the opportunity for a general review of the final project plans prior to construction to evaluate if our geotechnical recommendations have been properly interpreted and implemented. If our firm is not accorded the opportunity of making the recommended review, we can assume no responsibility for misinterpretation of our recommendations. We recommend that our office review the project plans prior to submittal to public agencies, to expedite project review. Dees & Associates, Inc. also requests the opportunity to observe and test grading operations and foundation excavations at the site. Observation of grading and foundation excavations allows anticipated soil conditions to be correlated to those actually encountered in the field during construction.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report are based upon the assumption that the soil conditions do not deviate from those disclosed in the borings. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that planned at the time, our firm should be notified so that supplemental recommendations can be given.

2. This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information and recommendations contained herein are called to the attention of the Architects and Engineers for the project and incorporated into the plans, and that the necessary steps are taken to ensure that the Contractors and Subcontractors carry out such recommendations in the field. The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. No other warranty expressed or implied is made.

3. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or to the works of man, on this or adjacent properties. In addition, changes in applicable or appropriate standards occur whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or partially, by changes outside our control. Therefore, this report should not be relied upon after a period of three years without being reviewed by a soil engineer.

APPENDIX A

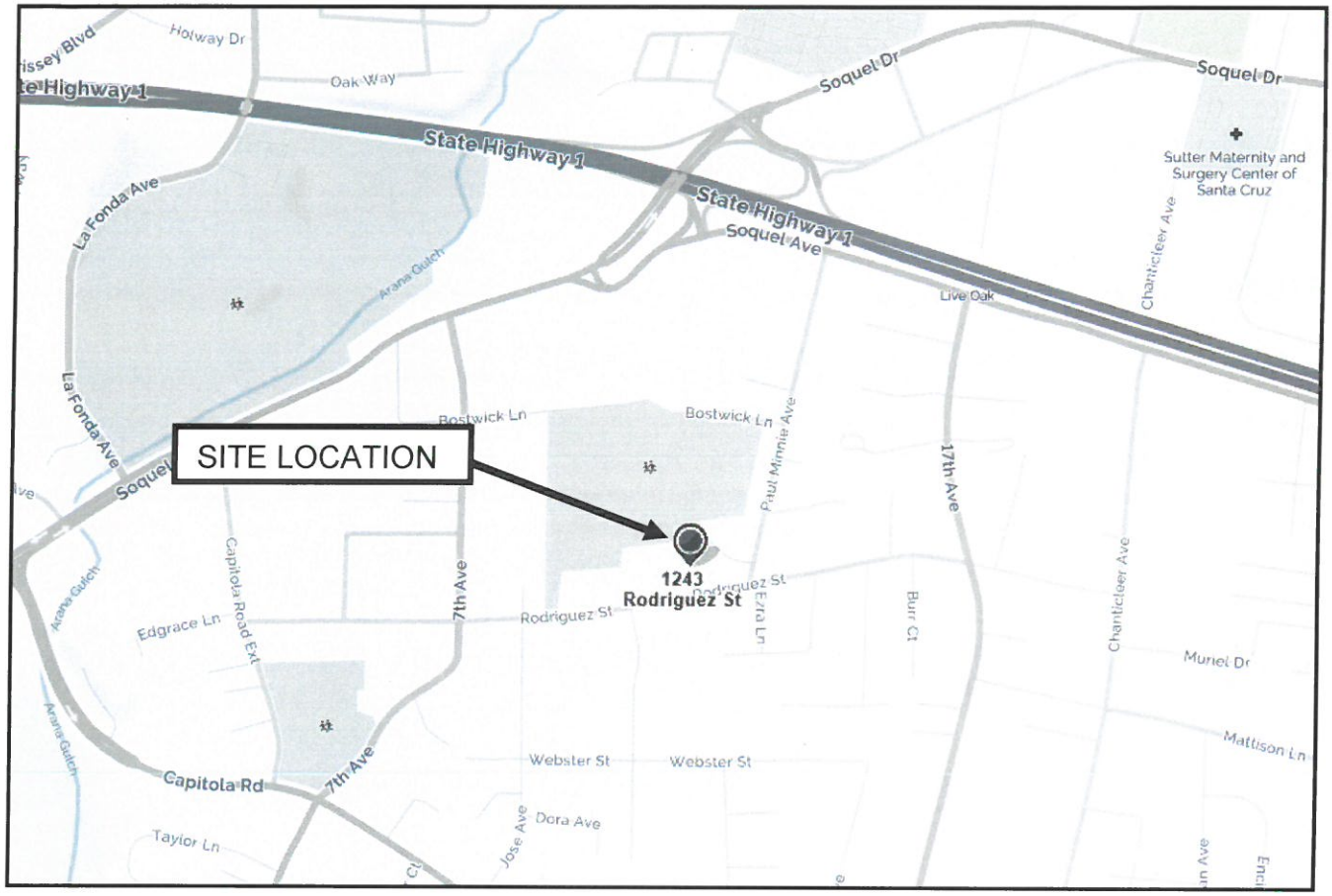
Site Vicinity Map

Site Plan

Unified Soil Classification System

Logs of Test Borings

Atterberg Limit Test Results



SITE VICINITY MAP
Figure 1

SITE PLAN
Figure 2

THE UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	CLASSIFICATION CRITERIA	
COARSE-GRAINED SOILS** MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE (THE NO. 200 SIEVE SIZE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAKED EYE)	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS (< 5% FINES)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	Wide range in grain sizes and substantial amounts of all intermediate particle sizes	
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Predominantly one size or a range of sizes with some intermediate sizes missing Not meeting all gradation requirements for GW	
		GRAVELS WITH FINES (>12% FINES)	GM	Silty gravels, gravel-sand-silt mixtures	Non plastic fines or fines with low plasticity Atterberg limits below "A" line or PI < 4	Above "A" line with 4 < PI < 7 are borderline cases requiring use of dual symbols
			GC	Clayey gravels, gravel-sand-clay mixtures	Plastic fines Atterburg limits above "A" line with PI > 7	
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS (<5% FINES)	SW	Well-graded sands, gravelly sands, little or no fines	Wide range in grain sizes and substantial amounts of all intermediate sizes missing	
			SP	Poorly graded sands, gravelly sands, little or no fines	Predominantly one size or a range of sizes with some intermediate sizes missing Not meeting all gradation requirements for SW	
		SANDS WITH FINES (>12% FINES)	SM	Silty sands, sand-silt mixtures	Non plastic fines or fines with low plasticity Atterburg limits below "A" line or PI < 4	Limits plotting in hatched zone with 4 < PI < 7 are borderline cases requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures	Plastic fines Atterburg limits above "A" line with PI > 7	
FINE-GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE (THE NO. 200 SIEVE SIZE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAKED EYE)	SILTS AND CLAYS (LIQUID LIMIT < 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity		
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
			OL	Organic silts and organic silty clays of low plasticity		
	SILTS AND CLAYS (LIQUID LIMIT > 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
			CH	Inorganic clays of medium to high plasticity, organic silts		
			OH	Organic clays of medium to high plasticity, organic silts		
	HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils	Readily identified by color, odor, spongy feel and frequently by fibrous texture	

**Gravels and sands with 5% to 12 % fines are borderline cases requiring use of dual symbols.

RELATIVE DENSITY OF SANDS AND GRAVELS

DESCRIPTION	BLOW / FT*
VERY LOOSE	0 – 4
LOOSE	4 – 10
MEDIUM DENSE	10 – 30
DENSE	30 – 50
VERY DENSE	OVER 50

CONSISTENCY OF SILTS AND CLAYS

DESCRIPTION	BLOWS / FT*
VERY SOFT	0 – 2
SOFT	2 – 4
FIRM	4 – 8
STIFF	8 – 16
VERY STIFF	16 – 32
HARD	OVER 32

*Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. 12 vertical inches.

L ■ M ■ T □ B □

SAMPLE TYPES REFERENCED ON BORING LOGS

TEST BORING LOG

PROJECT NO. SCR-1114
Rodriguez Street

LOGGED BY: CL | DATE DRILLED: 1-26-17 | BORING TYPE: 6" solid stem | BORING NO: 1

DEPTH (feet)	SAMPLE NO.	SOIL DESCRIPTION	USCS SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE (%) IN-SITU	MOISTURE (%) SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1	10-1-1 L	▼ Perched Groundwater at 1 foot Dark yellow brown Sandy CLAY, very moist, hard	CL	8 50/6	50/12	112.1	19.1				52.1	
3	1-2-1 T	Dark yellow brown SAND at top, CLAY at bottom, moist, dense	SC CL	23 24								
4	1-3-1 L	Brown Sandy CLAY, very moist, hard	CL	50 15 23 48	50/6 36	103.0	24.6 23.5					
8	1-4 T	Grayish brown mottled orange Clayey SAND, moist, very stiff	SC	5 10 10	20		22.1					
12	1-5 T	Yellow brown red and grey fine to coarse SAND with Silt and Gravel, moist, very dense	SM	18 27 30	57		10.9				6.9	
		▼ Groundwater at approximately 14 feet										
16	1-6 T	Yellowish brown fine to medium SAND with Silt, very moist, very dense	SP	13 18 40	58		18.6				7.9	
		Break in log between 18 and 19 feet										
21	1-7 T	Yellow brown SAND, wet, medium dense (*sand is flowing up – blow count not reliable)	SP	*	17		24.5				3.8	
		Easy drilling between 26 and 29 feet Break in log between 22.5 and 28 feet Drill rig lifting up at 29 feet										
30		Yellow brown SAND, wet, very dense	SP									
		Boring terminated at: 30 feet Perched Groundwater at:1 foot										

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Figure 4

* Blow count converted:
L = Field Blow Count / 2
M = Field Blow Count / 1.5

TEST BORING LOG

PROJECT NO. SCR-1114
Rodriguez Street

LOGGED BY: CL | DATE DRILLED: 1-26-17 | BORING TYPE: 6" solid stem | BORING NO: 2

DEPTH (feet)	SAMPLE NO.	SOIL DESCRIPTION	USCS SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE (%) IN-SITU	MOISTURE (%) SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1	2-1-1 L	Yellow brown mottled orange fine Sandy CLAY, moist, firm	CL	1 6								
2		▼ Perched groundwater at 1.5 feet		8	7	113.3	17.2					14.2
3	2-2-1 M			1 17								
4				28	30	104.0	21.3					
5	2-3 T	Brown Clayey SAND, moist, medium dense	SC	8 10 14	24		21.9					
8	2-4 T	Dark yellow brown mottled orange Clayey fine SAND, moist, medium dense	SC	9 10 11	21							
12	2-5 T	Dark yellow brown Silty fine SAND, moist, very dense	SM	18 24 36	60		13.5				18.2	
16		▼ Groundwater at 16.5 feet ±										
17		Easy drilling between 17.5 to 20 feet										
20	2-6 T	Dark yellow brown SAND with Silt, moist, very dense	SP	50/1"	50/1"		21.0				7.2	
21		Break in log between 21 and 26 feet										
28		Boring terminated at 28 feet Perched water at 1.5 feet Groundwater at 16.5 feet										

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Figure 5

* Blow count converted:
L = Field Blow Count / 2
M = Field Blow Count / 1.5

TEST BORING LOG

PROJECT NO. SCR-1114
Rodriguez Street

LOGGED BY: CL | DATE DRILLED: 1-26-17 | BORING TYPE: 6" solid stem | BORING NO: 3

DEPTH (feet)	SAMPLE NO.	SOIL DESCRIPTION	USCS SOIL TYPE	FIELD BLOW COUNT	SPT BLOW COUNT*	DRY DENSITY (PCF)	MOISTURE (%) IN-SITU	MOISTURE (%) SATURATED	COHESION (PSF)	PHI ANGLE	% PASSING 200 SIEVE	PLASTICITY INDEX
1	3-1-1 L	Dark yellow brown mottled orange Sandy CLAY, moist, stiff		1 8 12	10		15.8					
2												
3	3-2 T	Dark yellow brown Clayey fine SAND, moist, very dense		23 50/6"	50/6"							
4		Approximate contact										
5	3-3-1 L	Dark yellowish brown mottled orange Sandy CLAY, moist very hard		18 24 36	24							
6												
7	3-4 T	Dark yellowish brown mottled orange Sandy CLAY, moist very hard		7 20 44	64		20.6					
8												
9												
10												
11												
12	3-5 T	Dark yellowish brown mottled orange Sandy CLAY, moist very hard		13 24 20	40		23.1					
13												
14												
15												
16	3-6 T	Yellowish brown Silty fine to medium grained SAND with Gravel, moist, very dense		17 20 50/6"	50/6"		10.4					
17												
18												
19		Easier drilling at 19 feet										
20		Boring terminated at 20 feet No groundwater encountered										
21												
22												
23												
24												

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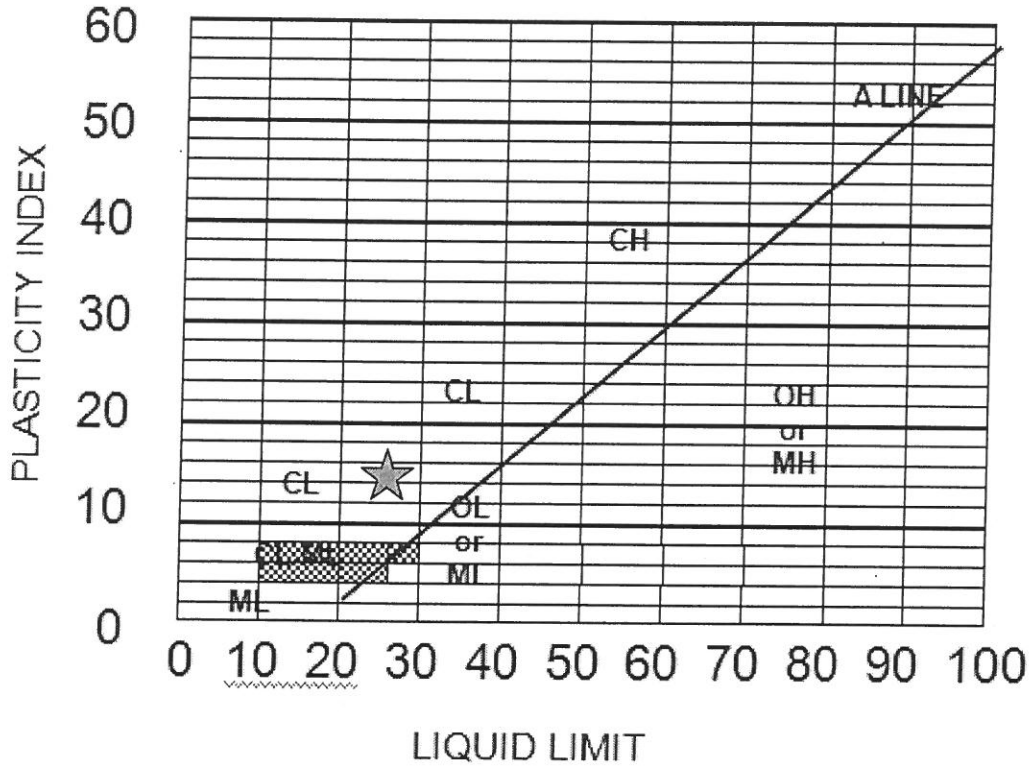
Figure 6

* Blow count converted:
L = Field Blow Count / 2
M = Field Blow Count / 1.5



MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
CH	Inorganic clays of medium to high plasticity, organic silts, fat clays	CL	Inorganic clays of low to medium plasticity, gravelly clay sandy clays, silty clays, lean clays
OH	Organic clays of medium to high plasticity, organic silts	OL	Organic silts and organic silty clays of low plasticity
Pt	Peat and other highly organic soils		

PLASTICITY DATA

SYMBOL	SAMPLE NO.	DEPTH (FEET)	IN-SITU MOISTURE CONTENT (%)	LIQUID LIMIT (%	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	LIQUIDITY INDEX (W-PL)/(LL PL)	UNIFIED SOIL CLASSIFICATION SYMBOL
★	2-1-1	3.5	17.2	27.2	13.0	14.2	0.21	CL