

DRAFT
Emerald Isle Assisted Living Facility Project
Initial Study/Mitigated Negative Declaration
City of Santa Rosa, Sonoma County, California

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Report Date: September 25, 2017

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DATE: September 25, 2017

TO: Public Agencies, Organizations, and Interested Parties

FROM: Patrick Streeter, Senior Planner

**SUBJECT: NOTICE OF PUBLIC REVIEW AND INTENT TO ADOPT A
MITIGATED NEGATIVE DECLARATION FOR THE OAKMONT AT
EMERALD ISLE PROJECT**

Pursuant to the State of California Public Resources Code and the “Guidelines for Implementation of the California Environmental Quality Act of 1970” as amended to date, this is to advise you that the Planning and Economic Development Department of the City of Santa Rosa has prepared an Initial Study on the following project:

Project Name:

Oakmont of Emerald Isle

Location:

0 Gullane Drive, Santa Rosa, Sonoma County, California
Assessor’s Parcel Number (APN): 173-670-004, 173-670-016

Property Description:

The Project site is located in hilly terrain adjacent to Fountaingrove Lake, a reservoir fed from the east by Piner Creek and formed by the Fountaingrove Dam. The surrounding area contains significant plant and animal life, including several native tree species as well as wetlands, aquatic life, and upland biological resources. The Fountaingrove Golf and Athletic Club lies along the northern and western banks of Fountaingrove Lake, which is ringed by Thomas Lake Harris Drive. Prominent existing land uses in the vicinity of the Project site include Thomas Lake Harris Open Space, Nagasawa Community Park, and the Oakmont of Varenna luxury retirement community.

The Project site itself is currently undeveloped, with steep tree-covered slopes of native oak and fir descending from a relatively flat center. The site elevation ranges from approximately 460 to

575 feet above sea level. There are no existing structures on the site and no paved or unpaved driveways. Access to the site is taken from the end of Gullane Drive, a private cul-de-sac that runs east from Thomas Lake Harris Drive. There are single-family homes beyond the golf course to the northeast and northwest of the site. The Oaks at Fountaingrove subdivision is immediately adjacent to the site to the northwest. The Fountaingrove Lodge lies approximately 450 feet to the southwest, and Fountaingrove Lake lies approximately 300 feet to the southeast of the site.

The General Plan land use designation applicable to the site is Low Density Residential, which allows for residential density of 2 to 8 units per gross acre. Attached single-family and multi-family units are permitted. Both Project parcels are zoned Planned Development (PD).

Project Description:

The project is located on a wooded hillside in the Fountaingrove area of Santa Rosa and includes construction and operation of an assisted living facility. The proposed Oakmont of Emerald Isle facility would be two stories, with a maximum roof height of 27.5 feet. The building footprint would be approximately 48,000 feet in area and the building floor area would equate to approximately 70,000 square-feet. In addition to the main building, site development includes a driveway connecting to Gulane Drive, a swimming pool, outdoor dining areas, walking paths, sport courts, raised garden beds, and a pet park. Parking facilities consist of 75 spaces, including 12 garages. Eight acres of the 12-acre site would remain undisturbed open space and approximately 66% of the existing on-site trees would be preserved and protected.

The development would include 49 units and would be licensed as a Residential Care Facility for the Elderly by the California Department of Social Services. The 49-unit, 71-bed facility would consist of 32 assisted living units and 17 memory care units. There would be approximately 50 employees and the facility would be staffed 24-hours per day with three 8-hour shifts. A town car and/or a small limo-bus will be available to provide transportation for residents.

The project will require the following discretionary approvals of the City of Santa Rosa:

- Design Review: Required for all new construction other than single-family detached houses.
- Conditional Use Permit: Required by zoning for operation of a Community Care Facility.
- Hillside Development Permit: Grading and construction on slopes greater than 10%

Environmental Issues:

The proposed project would not result in potentially significant impacts that cannot be mitigated to a level of non-significance. The Initial Study/Mitigated Negative Declaration document has been prepared in consultation with local, state, and Federal responsible and trustee agencies, in accordance with Section 15063 of the California Environmental Quality Act (CEQA). Furthermore, the Initial Study/Mitigated Negative Declaration will serve as the environmental

compliance document required under CEQA for any permits/approvals required by a responsible agency.

A 30-day (thirty-day) public review period shall commence on **September 25, 2017**. Written comments must be sent to the City of Santa Rosa, Planning and Economic Development Department, 100 Santa Rosa Avenue, Room 3, Santa Rosa CA 95402 by **October 25, 2017**. The City of Santa Rosa Planning Commission will hold a public hearing on the Initial Study/Mitigated Negative Declaration and project merits on **October 26, 2017**, at or after 4:00 p.m. in the Council Chambers, City Hall, 100 Santa Rosa Avenue, Santa Rosa.

Correspondence and comments can be delivered to Patrick Streeter, Senior Planner, phone: (707) 543-4323, email: PStreeter@srcity.org

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius (Centigrade)
°F	degrees Fahrenheit
µg/kg	micrograms per kilogram
AB	Assembly Bill
afy	acre-feet per year
AMBAG	Association of Monterey Bay Area Governments
APCD	Air Pollution Control District
APN	Assessor’s Parcel Number
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BMPs	Best Management Practices
CalEEMod	California Emissions Estimator Model
CalFire	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CA-MUTCD	California Manual on Uniform Traffic Control Devices
CCRWQCB	Central Coast Regional Water Quality Control Board
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGS	California Geological Survey
CHRIS	California Historical Resources Information System
CMA	Congestion Management Agency
CNEL	Community Noise Equivalent Level
COG	Council of Governments
CR	California Register of Historic Resources
CVP	Central Valley Project
dB	decibels
dba	A-weighted decibel scale
DEIR	Draft Environmental Impact Report
DLRP	California Department of Conservation Division of Land Resource Protection
DOT	Department of Transportation
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
EVA	Emergency Vehicle Access
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act

Acronyms and Abbreviations

FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHG	Greenhouse Gases
HRCQ	highway route controlled quantities
HUA	Hollister Urban Area
In/sec	inch per second
IS/MND	Initial Study/Mitigated Negative Declaration
LAFCO	San Benito County Local Agency Formation Commission
L _{dn}	day/night sound level
L _{eq}	equivalent continuous sound level
LHMP	Multi-Jurisdiction Local Hazard Mitigation Plan
LID	Low impact development
L _{max}	maximum instantaneous noise level
LOS	Level of Service
MBUAPCD	Monterey Bay Unified Air Pollution Control District
mgd	million gallons per day
MLD	most likely descendant
MRZ	Mineral Resource Zones
MT CO ₂ e	carbon dioxide equivalents
NAHC	Native American Heritage Commission
NCCAB	North Central Coast Air Basin
NHMRR	National Hazardous Materials Route Registry
NO _x	oxides of nitrogen
NPDES	National Pollution Discharge Elimination System
NR	National Register of Historic Places
NRHM	nonradioactive hazardous materials
NWIC	Northwest Information Center
O ₃	ozone
OSHA	California Division of Occupational Safety and Health
PM ₁₀ and PM _{2.5}	particulate matter
PPV	peak particle velocity
Qa	Holocene aged alluvial sediments
Qg	Holocene river gravels
Qoa	Pleistocene aged older alluvial sediments
R1	Single-Family Residential
RAM	radioactive materials

RCRA	Resource Conservation and Recovery Act of 1976
R-DEIR	Recirculated Draft EIR
RHNA	Regional Housing Needs Allocation
RM	Residential Mixed
ROG	Reactive organic gases
RSLs	Regional Screening Levels
RWQCB	regional water quality control boards
SMARA	Surface Mining and Reclamation Act of 1975
SOI	Sphere of Influence
SO _x	sulfur dioxide
SR	State Route
SSCWD	Sunnyslope County Water District
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resource Control Board
TAC	toxic air contaminant
TIMP	Transportation Impact Mitigation Fees
TIS	Traffic Impact Study
UGB	Urban Growth Boundary
USFWS	United States Fish and Wildlife Service
UWMP	Urban Water Management Plan
VHFRHS	Very High Fire Hazard Severity Zones
VOC	volatile organic compounds

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SECTION 1: INTRODUCTION

1.1 - Purpose

The purpose of this Initial Study/Mitigated Negative Declaration (IS/MND) is to identify any potential environmental impacts from development and operation of the Emerald Isle Assisted Living Facility Project (Project) in the City of Santa Rosa, California. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15367, the City of Santa Rosa (City) is the Lead Agency in the preparation of this IS/MND and any additional environmental documentation required for the Project. The City has discretionary authority over the proposed Project. The intended use of this document is to determine the level of environmental analysis required for the Project and to provide the basis for input from public agencies, organizations, and interested members of the public.

The remainder of this section provides a brief description of the Project location and the characteristics of the Project. Section 2 includes an environmental checklist giving an overview of the potential impacts that may result from Project implementation. Section 3 elaborates on the information contained in the environmental checklist, along with justification for the responses provided in the environmental checklist.

1.2 - Project Location

The proposed Project site is located at the eastern end of Gullane Drive adjacent to the Fountaingrove Golf and Athletic Club in the northern part of the City of Santa Rosa, Sonoma County, California (Exhibit 1). The site is within the city limits and within the Urban Growth Boundary (UGB) as approved by voters in 1996. The 12.17 acre site consists of two parcels, Assessor's Parcel Numbers (APN) 173-670-016 (10.4 acres) and APN 173-670-004 (2.1 acres), and is entirely surrounded by the golf course. Access to the site is provided via Thomas Lake Harris Drive, with regional access available via Fountaingrove Parkway from US 101.

1.3 - Environmental Setting

The Project site is located in hilly terrain adjacent to Fountaingrove Lake, a reservoir fed from the east by Piner Creek and formed by the Fountaingrove Dam. The surrounding area contains significant plant and animal life, including several native tree species as well as wetlands, aquatic life, and upland biological resources. The Fountaingrove Golf and Athletic Club lies along the northern and western banks of Fountaingrove Lake, which is ringed by Thomas Lake Harris Drive. Prominent existing land uses in the vicinity of the Project site include Thomas Lake Harris Open Space, Nagasawa Community Park, and the Oakmont of Varenna luxury retirement community (Exhibit 2).

The Project site itself is currently undeveloped, with steep tree-covered slopes of native oak and fir descending from a relatively flat center. The site elevation ranges from approximately 460 to 575 feet above sea level. There are no existing structures on the site and no paved or unpaved driveways. Access to the site is taken from the end of Gullane Drive, a private cul-de-sac that runs east from Thomas Lake Harris Drive. There are single-family homes beyond the golf course to the northeast and northwest of the site. The Oaks at Fountaingrove subdivision is immediately adjacent

to the site to the northwest. The Fountaingrove Lodge lies approximately 450 feet to the southwest, and Fountaingrove Lake lies approximately 300 feet to the southeast of the site.

The General Plan land use designation applicable to the site is Low Density Residential, which allows for residential density of 2 to 8 units per gross acre. Attached single-family and multi-family units are permitted. Both Project parcels are zoned Planned Development (PD).

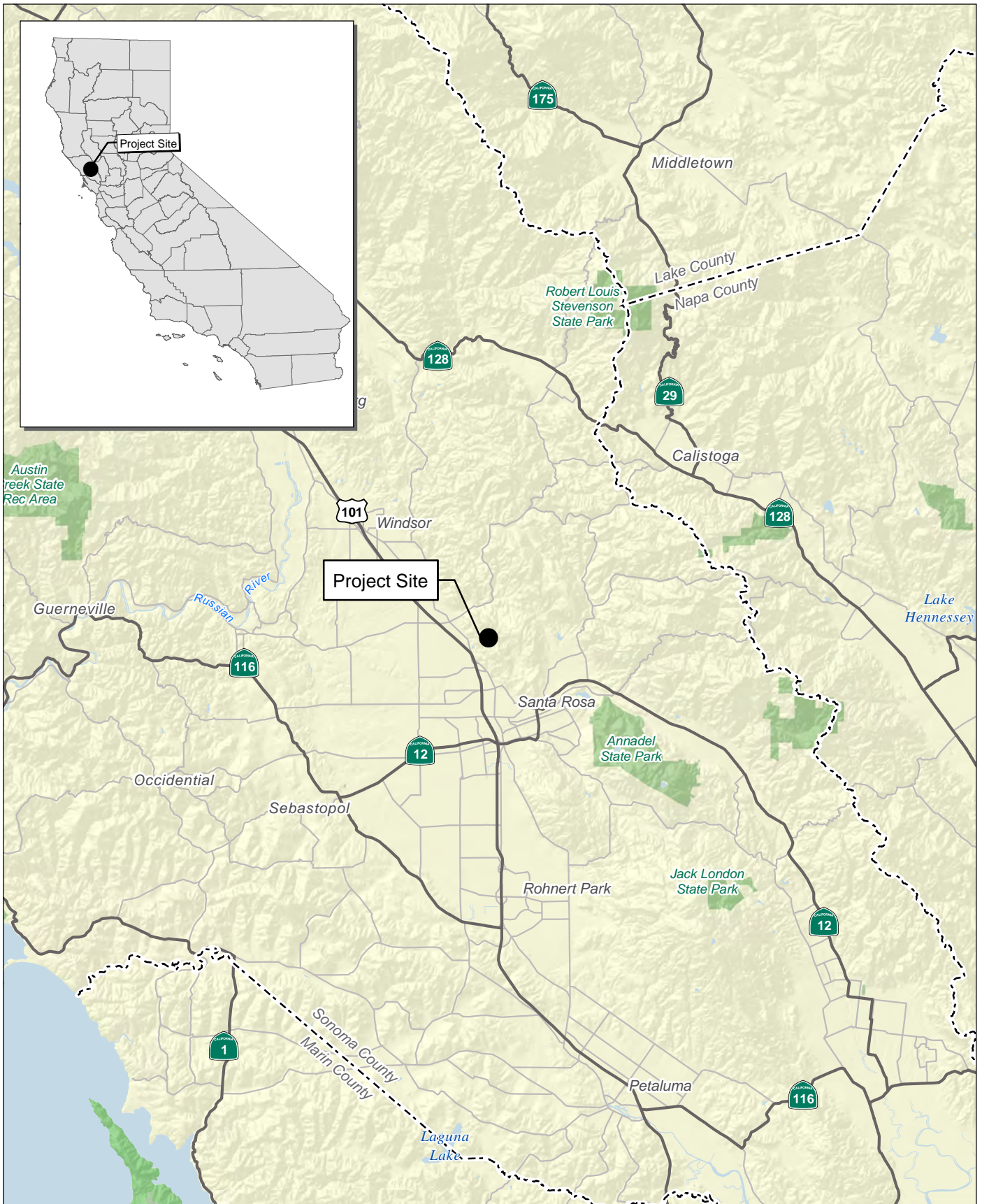
1.4 - Project Description

The Project Applicant, Oakmont Senior Living, is proposing to build and operate a 68,144-square-foot assisted living facility on the site, providing up to 71 beds in 49 units for assisted living and memory care.

As shown on the site plan (Exhibit 3), the proposed facility would be constructed at the center of the site, with a winding driveway leading from Gullane Drive to the main entrance to the building and wrapping around the northern and southern ends of the building. A total of 12 garage spaces and 63 surface parking spaces would be provided along the driveway for staff, residents, and guests. The building would be two stories, with a low-pitched gable roof 27.6 feet high at its ridge line, with a 7-foot architectural tower feature. The exterior of the building would feature Craftsman-style architecture, with articulated exterior walls of wood shingles, stucco, and natural stone facing (Exhibit 4). Exterior paint and materials would use cool tones intended to complement the natural surroundings.

The main entrance to the building would feature a *porte cochere*. There would also be a large courtyard at the center of the building and a memory care garden at the north end of the building. A dining patio would be constructed on the southeastern corner of the building, connected by walking paths. Landscaped walking paths would also connect the main entrance with the parking areas and the northern courtyard. The facility would include a common lobby, café, reading room, central dining areas with central kitchen, private dining rooms, activity rooms, beauty salon, fitness center, media rooms, laundry rooms, and offices for the staff. Outdoor amenities would include a swimming/aerobics pool, fountains, arbors, dining patios, walking paths, raised garden beds, sports courts, bocce court and a pet park. The facility would also include a towncar to shuttle residents around the community.

The building would comply with the current version of California's Title 24 Building Energy Efficiency Standards. High performance, low-emissivity windows, optimum insulation levels and efficient heating, air conditioning, ventilation, and water heating systems would enhance energy savings and comfort. The Project would include low-water-use plumbing fixtures as well as high-performance low-flow toilets, faucets and showerheads using 20 percent less water than standard fixtures. Low volatile organic compound (VOC) paints and adhesives would be used to enhance indoor air quality, together with carpeting and resilient flooring certified to low-emitting standards. All air ducts in the building would be sealed from installation to occupancy in order to protect them from construction dust and debris, and high-performance furnace filters would be installed to ensure clean indoor air during operation.



Source: Census 2000 Data, The CaSIL, FCS GIS 2016.

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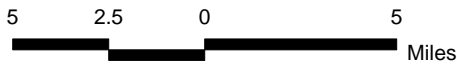


Exhibit 1 Regional Location Map

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Source: Bing Imagery, 2015; Sonoma County, 2016

Exhibit 2

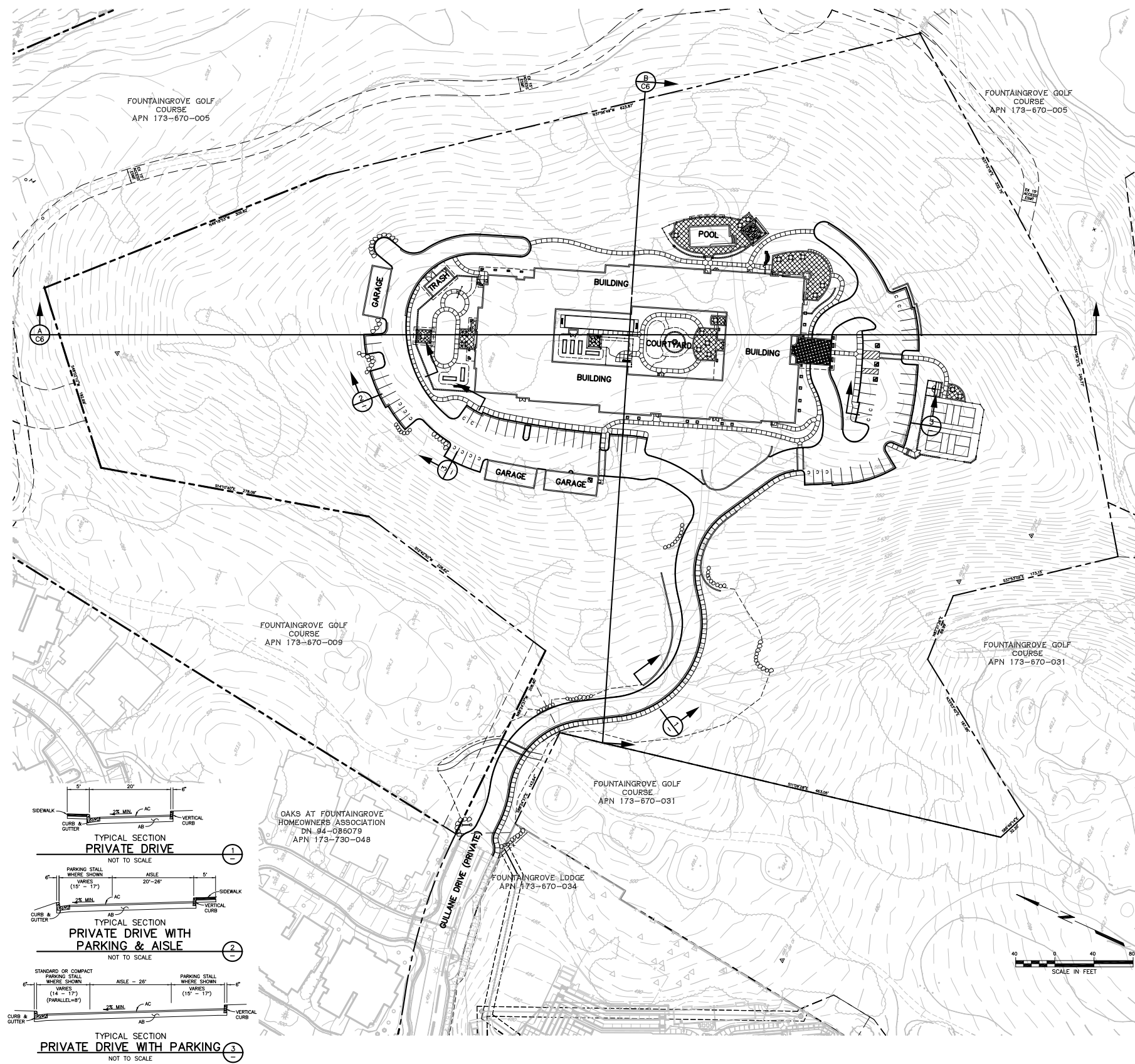
Local Vicinity Map

Aerial Base

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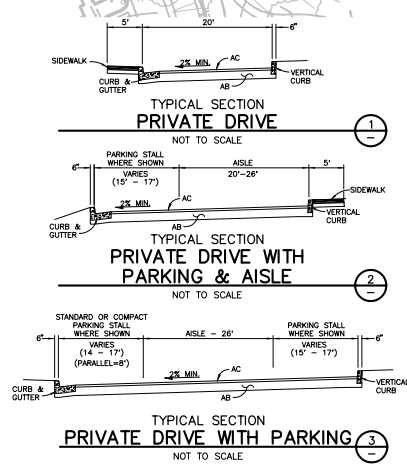


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LEGEND

LINES		
BOUNDARY	-----
PARCEL	-----
CENTER	-----
EASEMENT/SETBACK LINE	-----
STRUCTURE SETBACK LINE	-----
UTILITY LINES		
	EXISTING	PROPOSED
STORM DRAIN	24" SD	24" SD
WATER	8" W	8" W
SEWER	12" SS	12" SS
TOPOGRAPHY		
WATER VALVE		
BLOWOFF		
FIRE HYDRANT		
GAS METER		
STORM DRAIN MANHOLE		
STORM DRAIN CATCH BASIN		
STORM DRAIN DROP INLET		
STORM DRAIN CUDO BASIN		
SEWER MANHOLE		
SEWER CLEANOUT		
JOINT POLE		
LIGHT STANDARD		
GUY/ANCHOR		
CURB & GUTTER		
A.C. DIKE		
FENCE		
DITCH/SWALE		
MONUMENT		



Source: Brelie & Race, 2017



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Exhibit 3
Site Plan

OAKMONT SENIOR LIVING • EMERALD ISLE ASSISTED LIVING FACILITY PROJECT
INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

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NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

Source: Donald Sutherland Architect, 2017

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The majority of the Project site would remain undeveloped woodland and open space. Approximately 1.51 acres would consist of landscaping and approximately 8.03 acres would consist of natural open space (Exhibit 5). There are approximately 917 existing trees on the site, and while approximately 304 of those trees would be removed during construction, approximately 67 percent of the existing trees would be preserved on-site. Existing trees would be complemented with plantings of native oak and fir trees at the perimeter of the site, and Valley oaks and big leaf maples in the parking area. Drought tolerant and Mediterranean plant species would be used in landscaped areas of the site near the proposed building, and an irrigation system with weather-based controllers would be installed. Natural outcroppings of rock would be preserved in place at several locations on the site, and native boulders from the site would be used to enhance drainage areas. Retaining walls would be constructed along the eastern side of the building for erosion control at the steep slope of the hill. The ground surface behind the retaining walls would be sloped to drain into three bio-retention areas.

Construction of the Project is anticipated to start in March 2018 and last for up to 15 months. At the peak of construction activities there would be 60 workers on-site. Once operational, there would be 50 total employees, including administrative staff. There would be three shifts in a 24-hour period: 7:00 a.m. to 3:00 pm; 3:00 pm to 11:00 p.m.; and 11:00 p.m. to 7:00 a.m. On any given day at 3:00 pm, there could be as many as 45 staff on-site, when shifts turn over.

1.5 - Required Discretionary Approvals

The proposed Project would require the following discretionary approvals:

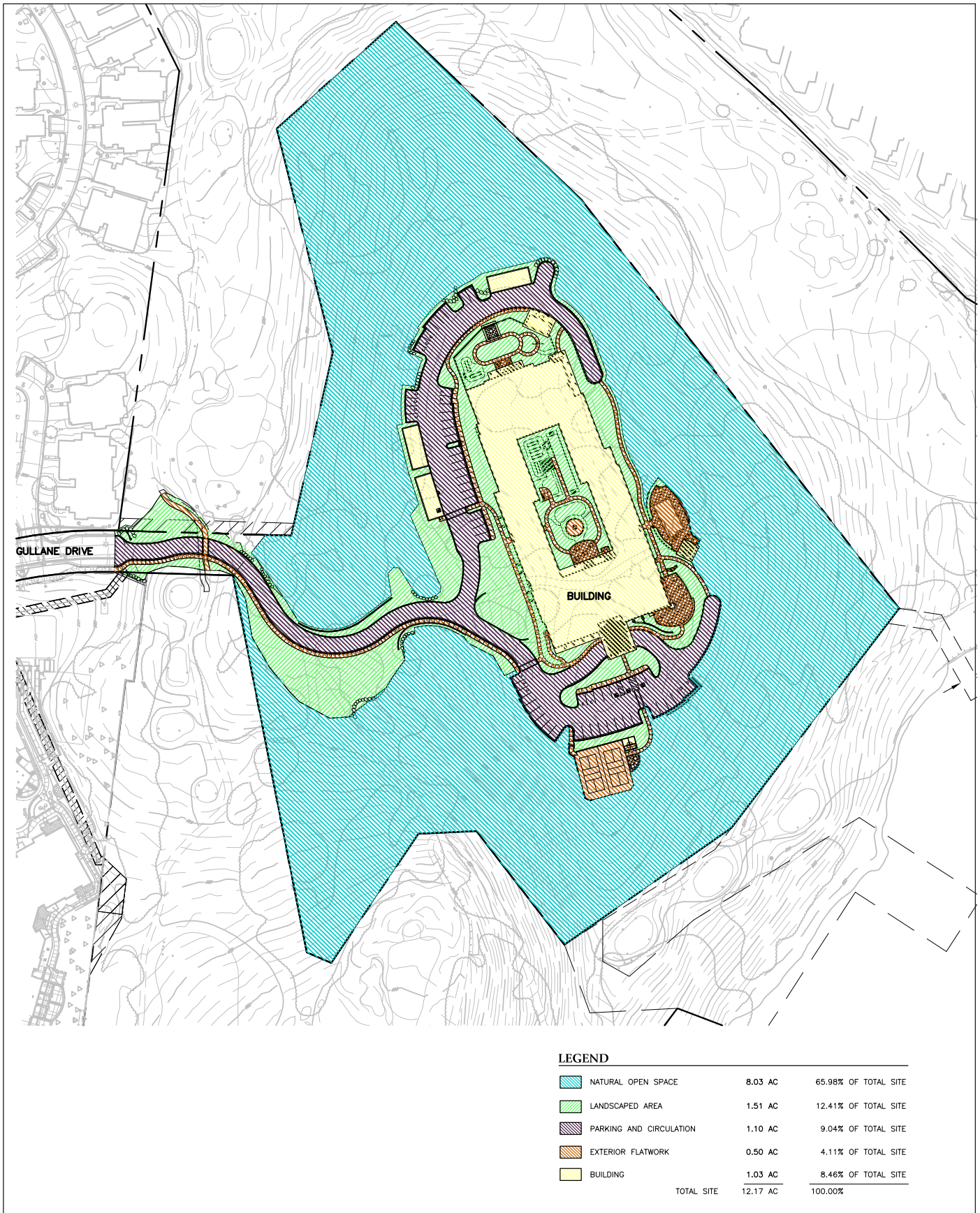
- Conditional Use Permit
- Hillside Development Permit
- Design Review

1.6 - Intended Uses of this Document

This IS/MND will be used by the City of Santa Rosa as supporting environmental documentation for any potential discretionary or ministerial approvals related to the Project, including but not limited to development permits, grading permits, National Pollution Discharge Elimination System (NPDES) permits, and Report of Waste Discharge. As defined by CEQA Guidelines Section 15381, Responsible Agencies for the proposed Project may include but be not limited to the County of Sonoma, the San Francisco Bay Regional Water Quality Control Board (RWQCB), the Bay Area Air Quality Management District (BAAQMD), and the California Department of Fish and Wildlife (CDFW). This document will also serve as a basis for soliciting comments and input from members of the public and public agencies regarding the proposed Project. The Draft IS/MND will be circulated for a minimum of 30 days, during which period comments concerning the analysis contained in the IS/MND should be sent to:

Patrick Streeter, AICP, Senior Planner
City of Santa Rosa
Planning and Economic Development
100 Santa Rosa Avenue
Phone: 707.543.4323
Fax: 707.543.3269
Email: PStreeter@srcity.org

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SECTION 2: ENVIRONMENTAL CHECKLIST AND ENVIRONMENTAL EVALUATION

Environmental Factors Potentially Affected		
The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.		
<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture and Forestry Resources	<input type="checkbox"/> Air Quality
<input type="checkbox"/> Biological Resources	<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology/Soils
<input type="checkbox"/> Greenhouse Gas Emissions	<input type="checkbox"/> Hazards/Hazardous Materials	<input type="checkbox"/> Hydrology/Water Quality
<input type="checkbox"/> Land Use/Planning	<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise
<input type="checkbox"/> Population/Housing	<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation
<input type="checkbox"/> Transportation/Traffic	<input type="checkbox"/> Tribal Cultural Resources	<input type="checkbox"/> Utilities/Services Systems
<input type="checkbox"/> Mandatory Findings of Significance		

Environmental 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 by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measure 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.

Date: 9-20-2017 Signed: 

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

Environmental Evaluation

Environmental Setting

A scenic vista is typically a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. According to the City of Santa Rosa General Plan, the natural ridgelines and landmarks, such as the Taylor and Bennett Mountains, are considered scenic corridors. Taylor Mountain is located approximately 6.26 miles south of the Project site, while Bennett Mountain is located approximately 7.22 miles southeast. Views of the Sonoma Mountains, visible from many flatland areas of the City, are also recognized as a scenic resource.

The California Department of Transportation identifies officially designated scenic highways through the California Scenic Highway Mapping System. The Project site is not located in the vicinity of an officially designated scenic highway.¹ The closest officially designated scenic highways are State Route 12 (SR-12) and SR-116, located approximately 4.37 miles east and 8.18 miles west of the Project site, respectively. The Project site is not located within the vicinity of an eligible State Scenic Highway. The City's General Plan and Municipal Code identify a number of scenic corridors, including US 101, SR-12, Mendocino Avenue/Old Redwood Highway, Fulton Road, Calistoga Road, Guerneville Road, Piner Road, Hall Road/West Third Street, Santa Rosa Avenue, Stony Point Road, Petaluma Hill Road, and Bennett Valley Road. The Project site is not located along or within the vicinity of these roads; however Fountaingrove Parkway, which circles the project site, is classified as a Scenic Road in the General Plan.

The existing visual character of the Project site is defined by steep, tree-covered slopes consisting of native oak and fir, descending from a relatively flat center. The Project site also contains various

¹ Shultis, Brian. "Officially Designated State Scenic Highways and Historic Parkways." *Officially Designated State Scenic Highways and Historic Parkways*. California Department of Transportation, n.d. Web. 10 Oct. 2016.

“dry” shrubs that are spread throughout the site. The existing visual character of the surrounding area generally consists of low-density hillside neighborhood adjacent to Fountaingrove Lake, a reservoir fed from the east by Piner Creek and formed by the Fountaingrove Dam, and the Fountaingrove Golf and Country Club. The Project site itself is currently undeveloped, and views from the site are largely obscured by dense tree coverage, as shown on Exhibit 6, Existing Views of the Project Site. No portion of the site is identified as a “ridge” on the General Plan Ridgeline exhibit.² The Project site is not visible from valley floor locations, and, even when viewed from a close vantage point, much of the Project site is framed by higher background hillsides.

The City’s Municipal Code establishes site planning and development standards for Planned Development (PD) Zones that require parcel size, building site area, lot coverage, setbacks, height limits, parking requirements, and open space requirements to conform with the approved Policy Statement and Development Plan for the site. These standards are identified during the rezoning of a property to the PD zoning district, with review by the Design Review Board, Planning Commission, and City Council.

Although the site is located on a wooded hill near the northern city limit, it is nonetheless located in the urbanized context of the City of Santa Rosa, where existing development within the city limit contributes substantial nighttime light. Existing sources of light in the vicinity of the Project site include streetlights, lighting from single-family homes, and the surrounding golf course buildings. Existing sources of glare in the vicinity include building windows and the windshields of parked cars, although the abundant trees and vegetation in the area reduce the effects of glare.

a) Have a substantial adverse effect on a scenic vista?

Less than significant impact. As mentioned above, the City’s General Plan identifies various scenic resources, including views of the Sonoma Mountains, ridgelines, scenic entries, corridors, and roads. The General Plan also seeks to guide development in a way that respects natural features in the design and construction of hillside development. The site is located on a wooded hilltop and the Project would preserve approximately 613 of 917 existing trees on-site, screening the Project entirely from view. As shown on Exhibit 7, where the dashed green line represented the roofline of the proposed building, the proposed Project would not be visible from off-site vantage points. No additional trees would need to be planted for further screening. Therefore, impacts to scenic vistas and resources identified in the City of Santa Rosa General Plan would be less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?

No impact. As described above, segments of SR-12 and SR-116 are officially designated State Scenic Highways; however, these segments are located approximately 4.37 miles east and 8.18 miles west of the site, respectively. Given the substantial tree cover that would remain on-site with development of the Project and the intervening distance from the designated State Scenic Highways, the Project would not result in a substantial impact on these scenic resources and impacts would be less than significant.

² Santa Rosa General Plan 2035, figure 7-3.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less than significant impact. The Project site is located in hilly terrain adjacent to Fountaingrove Lake, with pockets of residential, commercial, and recreational development and relatively dense tree cover. The site is located near the northern city limit of Santa Rosa, with open space and agricultural land to the west in unincorporated Sonoma County. The proposed facility would be constructed at the center of the site, with a winding driveway leading from Gullane Drive to the main entrance to the building. The exterior of the building would feature, Craftsman-style architecture, with articulated exterior walls of wood shingles, stucco, and natural stone facing. Exterior paint and materials would use cool tones intended to complement the natural surroundings. The Project would be subject to design review by the City, to ensure the building's style is compatible with established community standards. Furthermore, Approximately 613 of 917 existing trees would be preserved on-site, screening the Project when viewed from off-site vantage points as shown on Exhibit 7. Therefore, the Project would not substantially degrade the visual character of the site or its surroundings and associated impacts would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than significant impact. The Project site is located in the urban context of Santa Rosa, where existing development contributes a substantial amount of light that affects nighttime views. Existing sources of lighting in the immediate vicinity of the Project include streetlights, lighting from single-family homes, and the surrounding golf course buildings.

The Project would introduce new sources of light, including lighting on the exterior of the proposed building and in the parking area. However, the Project would be required to comply with City of Santa Rosa regulations and guidelines, including the provisions of Santa Rosa Municipal Code Section 20-30.080, which require that lighting fixtures be shielded or recessed to reduce light spillage onto adjoining properties, and that each light fixture be directed downward and away from adjoining properties and public rights-of-way so that no on-site light fixture directly illuminates an area off-site. Additionally, on-site trees and topography would obscure glare or nighttime lighting from sources on the site. The Project does not propose the use of any building materials that would create significant glare. Compliance with the above-referenced regulations and standards would ensure that the proposed Project's contribution to existing light and glare sources would be nominal in comparison to existing conditions. Therefore, overall, impacts with respect to glare or nighttime views would be less than significant.



Photograph 1: Thomas Lake Harris Drive. View 2 Existing.



Photograph 2: Thomas Lake Harris Drive. View 3 Existing.



Photograph 3: Gullane Drive. View 1 Existing

Source: FirstCarbon Solutions, 2016.

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Photograph 1: Gullane Drive. View 1 - with roof line of proposed building outlined behind existing oaks that will remain.



Photograph 2: Thomas Lake Harris Drive. View 2 - With roof line of propose building outlined behind existing oaks that will remain.



Photograph 3: Thomas Lake Harris Drive. View 3 - With roof line of proposed building outlined behind existing oaks that will remain.

Source: FirstCarbon Solutions, 2016.

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Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<p>2. Agriculture and Forestry Resources <i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:</i></p>				
<p>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP), was established by the State Legislature in 1982 to assess the location, quality, and quantity of agricultural lands and conversion of these lands over time. The FMMP has established five farmland categories.

- Prime Farmland is comprised of the best combination of physical and chemical features able to sustain long-term agricultural production. Irrigated agricultural production is a necessary land use four years prior to the mapping date. The land must be able to store moisture and produce high yields.

- Farmland of Statewide Importance possesses similar characteristics to Prime Farmland with minor shortcomings, such as less ability to hold and store moisture and more pronounced slopes.
- Unique Farmland has a production history of propagating crops with high-economic value.
- Farmland of Local Importance is important to the local agricultural economy. Local advisory committees and county specific board of supervisors determine this status.
- Grazing Land is suitable for browsing or grazing of livestock.

The FMMP classifies the Project site and its surroundings as urban and built-up land. FMMP maps indicate that there is Grazing Land to the west of the Project site outside the City of Santa Rosa Urban Growth Boundary (UGB), as well as an area of Farmland of Statewide Importance approximately 0.5 mile to the northwest of the Project site beyond the city limit and UGB.³ However, the Project site contains no Prime Farmland or Farmland of Statewide Importance. The Project site is not zoned for agriculture.

The Williamson Act, codified in 1965 as the California Land Conservation Act, allows local governments to enter into contracts with private landowners with the intent of restricting the use of land to agricultural or related open space through tax incentives. These incentives tax farmers based on an open space designation, which is a much lower rate than the full market value tax. Through this contract, farmers agree to freeze development of their land for 10 years. The current Sonoma County Williamson Act Map denominates the land on the Project site as “Urban and Built-up Land”: land occupied by myriad uses such as residential, commercial, and institutional facilities.

There is an approximately 320-acre plot of land located approximately 0.4 mile due west of the Project site, outside of the city limits in unincorporated Sonoma County, that is subject to a Williamson Act contract with a designation of “Mixed Enrollment Agricultural Land.”⁴

The Sonoma County Agricultural Preservation and Open Space District (SCAPOS) “permanently protects the diverse agricultural, natural resource, and scenic open space lands of Sonoma County for future generations.”⁵ The SCAPOS does not list the Project site as protected lands.

Public Resources Code (PRC) Section 4526 provides that the California Board of Forestry and Fire Protection defines “Timberland” as land, not owned by the federal government, nor designated as experiential forest land, which is capable and available for growing any commercial tree species. The board defines commercial trees on a district basis following consultation with district committees and other necessary parties. PRC Section 12220 (g) defines forest land as “. . . land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.”⁶ Neither the Santa Rosa

³ Farmland Mapping and Monitoring Program, Sonoma County Important Farmland. 2014. Website: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/son14.pdf>.

⁴ City of Santa Rosa, General Plan 2035 Draft Environmental Impact Report, page 4.L-4.

⁵ “Mission,” Sonoma County Agricultural Preservation and Open Space District. Website: <http://www.sonomaopenspace.org/who-we-are/mission/>. Accessed October 7, 2016.

⁶ “Public Resources Code Section 12220,” CA codes. Website: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=prc&group=12001-13000&file=12220>. Accessed October 7, 2016.

General Plan 2035 nor the Santa Rosa General Plan 2035 EIR specifies any forestry or logging companies within City boundaries. The Project site is located in a wooded semi-residential context in the northern part of Santa Rosa. It is within the city limits and within the UGB. There is no forest or timberland and no property zoned Timberland production on or near the Project site.⁷

Would the Project:

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

No impact. As described above, the FMMP identifies the Project site as “Urban and Built Up Land,” there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance contained within the site. Therefore, no impacts related to conversion of Farmland would occur.

- b) **Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

No impact. The zoning code for the City of Santa Rosa designates the Project site as “Planned Development (PD)-Low Density Residential,” which is a non-agricultural zoning district. No Williamson Act contract encumbers the site. Therefore, no impacts related to conflicts with agricultural zoning or Williamson Act contracts would occur.

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

No impact. The Project site is in a residential area in the northern part of Santa Rosa, surrounded by single-family residential housing and a golf course. The site is zoned “Planned Development,” which is a non-forest land zoning district. As described above, there is no forest land, timberland, or land zoned for Timberland Production on the site or in the surrounding area. This condition precludes any potential conflict with zoning for forest or timberland. No associated impacts would occur.

- d) **Result in the loss of forest land or conversion of forest land to non-forest use?**

Less than significant impact. The Project site is located on a wooded hilltop at the eastern end of Gullane Drive in Santa Rosa. The site is surrounded on all sides by the Fountaingrove Golf and Athletic Club, with residential development to the west and north. There are approximately 917 existing trees on the site, and while approximately 304 of those trees would be removed during construction, approximately 67 percent of the existing trees would be preserved on-site. Replacement trees and landscape plantings would also be provided with development of the Project. Therefore, impacts with respect to conversion of forest land would be less than significant.

⁷ Santa Rosa General Plan 2035 Draft Environmental Impact Report, 4.L-6-9.

- e) **Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

Less than significant impact. A significant impact would occur if the Project would indirectly result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. As described above, the site is located on a wooded hilltop, surrounded on all sides by the Fountaingrove Golf and Athletic Club with residential development to the west and north. The Project would involve construction and operation of an assisted living facility, which is consistent with the land use and zoning designations applicable to the site. The site does not contain Farmland and the character of the surrounding area within the city limits has a moderately urbanized character. While there is Farmland in the vicinity of the site, it is located outside the city limits and is protected from conversion by a Williamson Act contract. As such, development of the Project would not induce the conversion of Farmland in the surrounding area.

There is no timberland on the site or in the surrounding area, and as described above, the site would retain significant native tree cover with development of the Project. The Project is consistent with the existing residential and recreational development in the area as well as the existing land use and zoning designations. Therefore, the Project would not induce the conversion of timberland or forest land in the surrounding area. Overall, associated impacts would be less than significant.

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

Environmental Evaluation

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Air quality modeling data that was used in the analysis below is included in Appendix A of this document.

Would the Project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant impact with mitigation incorporated. The United States Environmental Protection Agency (EPA) is responsible for identifying nonattainment and attainment areas for each criteria pollutant within the San Francisco Bay Area Air Basin. The Air Basin is designated nonattainment for state standards for 1-hour and 8-hour ozone, 24-hour respirable particulate matter (PM₁₀), annual PM₁₀, and annual fine particulate matter (PM_{2.5}).⁸

⁸ BAAQMD. 2017. Air Quality Standards and Attainment Status. January. Website: <http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status>. Accessed May 22, 2017.

To address regional air quality standards, the BAAQMD has adopted several air quality policies and plans, and in April 2017, BAAQMD adopted their 2017 Clean Air Plan (2017 CAP),⁹ which serves as the regional air quality plan (AQP) for the Air Basin for attaining federal ambient air quality standards. The primary goals of the 2017 CAP are to protect public health and protect the climate. The 2017 CAP acknowledges that the BAAQMD's two stated goals of protection are closely related. As such, the 2017 CAP identifies a wide range of control measures intended to decrease both criteria pollutants¹⁰ and greenhouse gases.¹¹ In September 2010, BAAQMD adopted their final Bay Area 2010 Clean Air Plan (2010 CAP),¹² which became the most recent ozone plan for the Air Basin. The 2010 CAP identifies how the Air Basin would achieve compliance with the state 1-hour air quality standard for ozone, and how the region will reduce ozone from transporting to other basins downwind wind of the Air Basin. The 2017 CAP updates the BAAQMD's 2010 CAP, pursuant to air quality planning requirements defined in the California Health & Safety Code.

The 2017 CAP also accounts for projections of population growth provided by Association of Bay Area Governments and vehicle miles traveled provided by the Metropolitan Transportation Commission, and identifies strategies to bring regional emissions into compliance with federal and State air quality standards. A project would be judged to conflict with or obstruct implementation of the 2017 CAP if it would result in substantial new regional emissions not foreseen in the air quality planning process.

The BAAQMD does not provide a numerical threshold of significance for project-level consistency analysis. Therefore, the following criteria will be used for determining a project's consistency with the AQP.

- Criterion 1: Does the project support the primary goals of the AQP?
- Criterion 2: Does the project include applicable control measures from the AQP?
- Criterion 3: Does the project disrupt or hinder implementation of any AQP control measures?

Criterion 1

The primary goals of the 2017 CAP, the current AQP to date, are to:

- Attain air quality standards;
- Reduce population exposure to unhealthy air and protecting public health in the Bay area; and
- Reduce greenhouse gas emissions and protect the climate.

As discussed under Impacts 3a), 3b), 3c) and 3d) below and GHG Impacts 7a) and 7b), with implementation Mitigation Measure (MM) AIR-1 and MM AIR-2, the Project would not create a

⁹ BAAQMD. 2017. Final 2017 Clean Air Plan. Website: http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed May 24, 2017.

¹⁰ EPA has established national ambient air quality standards (NAAQS) for six of the most common air pollutants—carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide—known as “criteria” air pollutants (or simply “criteria pollutants”).

¹¹ A greenhouse gas is any gaseous compound in the atmosphere that is capable of absorbing infrared radiation, thereby trapping and holding heat in the atmosphere. By increasing the heat in the atmosphere, greenhouse gases are responsible for the greenhouse effect, which ultimately leads to global warming.

¹² Bay Area Air Quality Management District (BAAQMD). 2010. Multi Pollutant Clean Air Plan. Website: <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>. Accessed May 24, 2017.

localized violation of state or federal air quality standards, significantly contribute to cumulative nonattainment pollutant violations, expose sensitive receptors to substantial pollutant concentrations, or result in significant greenhouse gas emissions. The Project is therefore consistent with Criterion 1.

Criterion 2

The 2017 CAP contains 85 control measures aimed at reducing air pollutants and GHGs at the local, regional, and global levels. Along with the traditional stationary, area, mobile source, and transportation control measures, the 2017 CAP contains a number of new control measures designed to protect the climate and promote mixed use, compact development to reduce vehicle emissions and exposure to pollutants from stationary and mobile sources.¹³ The 2017 CAP also includes an account of the implementation status of control measures identified in the 2010 CAP.

None of the stationary source control measures contained in the 2017 CAP are directly applicable to the Project, which is a proposed 49-unit assisted living facility. In addition, none of the mobile source measures or land use and local impact measures contained in the 2017 CAP directly apply to the Project. The Project would be consistent with Transportation Control Measures (TCM) D-1 through D-3 of the 2017 CAP as follows:

- TCM D-1 will expand bicycle facilities serving employment sites, educational and cultural facilities, residential areas, shopping districts, and other activity centers. Typical improvements include bike lanes, routes, paths, and bicycle parking facilities. This TCM also includes improving bicycle access to transit and supporting the annual Bike to Work event.
- TCM D-2 will improve pedestrian facilities and encourage walking by funding projects that improve pedestrian access to transit, employment, and major activity centers. Improvements may include sidewalks/paths, benches, reduced street width, reduced intersection turning radii, crosswalks with activated signals, curb extensions/bulbs, buffers between sidewalks and traffic lanes, and street trees.
- TCM D-3 will support and promote land use patterns, policies, and infrastructure investments that support higher density mixed-use, residential and employment development near transit in order to facilitate walking, bicycling and transit use.

The Project site would be served by Santa Rosa CityBus service. Route 1 of the bus service stops at Fountaingrove Parkway/Thomas Lake Harris Drive, 0.7 mile from the Project site on Gullane Drive. It operates Monday through Friday from 6:45 a.m. to 8:25 p.m. with approximately half-hour headways. On Saturdays, Route 1 operates from 8:15 a.m. to 5:55 p.m. with approximately one-hour headways.

There are 174 miles of Class I, II, and III bikeways in the City of Santa Rosa. Proposed pedestrian and bicycle facilities would connect to existing infrastructure. Continuous pedestrian facilities exist between this transit stop and the Project site. The Project would effectively tie into the regional

¹³ BAAQMD 2017. Final 2017 Clean Air Plan. Website: http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed May 24, 2017.

bicycle circulation network with the existing Class I bicycle route that parallels Fountaingrove Parkway. Additionally, continuous sidewalks would effectively link the Project site to the nearest transit facilities, and the Project would include planting of native oak and fir trees at the perimeter of the Project site.

The 2010 CAP contained Energy and Climate measures that were carried forward in the 2017 CAP. Relative to the Energy and Climate measures contained in the 2017 CAP, the Project would be consistent with all applicable measures:

- **Energy Efficiency:** The Project Applicant would be required to conform to the energy efficiency requirements of the California Building Standards Code, also known as Title 24, as applied to residential land uses. Specifically, the Project must implement the requirements of the most recent Building Energy Efficiency Standards, which is the current version of Title 24. The 2016 Building Energy Efficiency Standards (which are updated on an approximately three-year cycle) went into effect on January 1, 2017, which continue to improve upon the previous 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. For each year of construction, in both newly constructed buildings and alterations to existing buildings, the 2013 Standards (for residential and nonresidential buildings) were expected to reduce the growth in electricity use by 555.5 gigawatt-hours per year and to reduce the growth in peak electrical demand by 148.4 megawatts. The 2013 Standards were also expected to reduce the growth in natural gas use by 7.04 million therms per year beyond the prior 2008 Standards. Overall, the 2013 Standards used 25 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 Standards. For comparison purposes, single-family homes built to the new 2016 standards will use about 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards. In 30 years, California will have saved enough energy to power 2.2 million homes, reducing the need to build 12 additional power plants.
- **Renewable Energy.** Pacific Gas and Electric Company (PG&E) provides electricity and natural gas service to the City. PG&E facilities include nuclear, natural gas, and hydroelectric facilities. PG&E's 2012 power mix consisted of nuclear generation (21.0 percent), large hydroelectric facilities (11.0 percent) and renewable resources (19.0 percent), such as wind, geothermal, biomass and small hydro. The remaining portion came from natural gas (27.0 percent), and unspecified sources (21.0 percent).
- **Urban Heat Island Mitigation and Shade Tree Planting.** The Project would implement landscaping, including shade trees on-site.

In summary, the Project would not conflict with any applicable measures under the 2017 CAP, and is therefore consistent with Criterion 2.

Criterion 3

The Project will not preclude extension of a transit line or bike path, propose excessive parking beyond parking requirements, or otherwise create an impediment or disruption to implementation of any AQP control measures. As shown above, the Project would incorporate several AQP control measures as Project design features. The Project is therefore consistent with Criterion 3.

As addressed in Impacts 3b through 3e below, the Project would not violate air quality standards, result in a cumulative contribution of a non-attainment pollutant, expose sensitive receptors to substantial air pollution concentrations, or create objectionable odors affecting a substantial number of people, with incorporation of MM AIR-1 and MM AIR-2. Thus, the Project would not conflict with the 2017 CAP. Therefore, with mitigation, impacts associated with conflicting with or obstructing implementation of the 2017 CAP would be less than significant.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less than significant impact with mitigation incorporated. This impact relates to localized criteria pollutant impacts. Potential localized impacts would consist of exceedances of state or federal standards for PM_{2.5}, PM₁₀ carbon monoxide (CO), sulfur dioxide (SO₂), and nitrogen dioxide (NO₂). Particulate matter emissions (both PM₁₀ and PM_{2.5}) are of concern during Project construction because of the potential to emit fugitive dust during earth-disturbing activities. CO emissions are of concern during Project operation because operational CO hotspots are related to increases in on-road vehicle congestion. In addition, emissions of volatile organic carbon (VOC) are important because of their participation in the formation of ozone. VOC emissions result from motor vehicles, and hydrocarbon evaporation from solvent use and painting. Regional construction and operational impacts are not addressed in this section, but are addressed under 3c), below.

Short-Term Construction Impacts

Construction Fugitive Dust

Project construction would require general site clearing and grading/earthwork activities during construction. Emissions from construction activities are generally short-term in duration, but may still cause adverse air quality impacts. The Project would generate emissions from construction equipment exhaust, worker travel, and fugitive dust (PM₁₀ and PM_{2.5}). Construction activities would also temporarily create emissions of equipment exhaust and other air contaminants. The Project's potential impacts related to equipment exhaust are evaluated separately under 3c), below.

BAAQMD does not recommend a numerical threshold for fugitive dust particulate matter emissions. Instead, BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. If all appropriate emissions control measures are implemented for a project as recommended by BAAQMD, then fugitive dust emissions during construction are not considered significant.

As required by MM AIR-1, described below, the Project would implement the best management practices (BMPs) recommended by BAAQMD. Therefore, with mitigation, short-term construction impacts associated with violating an air quality standard or contributing substantially to an existing or projected air quality violation would be less than significant.

Long-Term Operational Impacts

Operational CO Hotspot

CO emissions from Project-related traffic would be the greatest pollutant of concern at the local level, since congested intersections with a large volume of traffic have the greatest potential to cause high, localized concentrations of CO.

BAAQMD recommends a screening analysis to determine whether a project has the potential to contribute to a CO hotspot. The screening criteria identify when subsequent site-specific CO dispersion modeling is necessary. BAAQMD considers a project's local CO emissions less than significant if the following screening criteria are met:

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

Based on the Focused Traffic Study for the Emerald Isle Assisted Living Project prepared by W-Trans (Appendix G), implementation of the Project would increase daily traffic volumes by an additional 189 vehicles per day, including 10 during the AM peak hour and 16 during the PM peak hour. The intersection of Thomas Lake Harris Drive and Fountaingrove Parkway currently has 1,960 vehicles during the AM peak hour and 1,858 vehicles during the PM peak hour. The addition of 189 vehicles per day to existing traffic conditions would be well below the hourly screening criteria identified above, and therefore would be consistent with applicable congestion management programs within Sonoma County, thus satisfying Criterion 1.

Likewise, the Project would not increase traffic volumes by more than 44,000 vehicles per hour at nearby intersections, or increase traffic volumes by more than 24,000 vehicles per hour at nearby intersections where vertical and/or horizontal mixing is substantially limited, satisfying both Criteria 2 and 3 above. Furthermore, the adjacent roadways are not located in an area where vertical and/or horizontal mixing is substantially limited. Therefore, the Project would not significantly contribute to an existing or projected CO hotspot.

Based on the above, long-term operational impacts associated with violating an air quality standard or contributing substantially to an existing or projected air quality violation would be less than significant.

- c) **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?**

Less than significant impact. Non-attainment pollutants of concern include ozone, PM₁₀ and PM_{2.5}. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project’s individual emissions would be cumulatively considerable. If a project exceeds the identified thresholds of significance, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region’s existing air quality conditions. The analysis considers construction and operation period impacts separately, as described below.

Short-Term Construction Impacts

A preliminary screening method is provided in BAAQMD’s 2017 Guidelines for construction-related impacts associated with criteria air pollutants and precursors. The preliminary screening is used to indicate whether a project’s construction-related air pollutants or precursors could potentially exceed BAAQMD’s thresholds of significance. The construction of the Project would result in a less than significant impact to air quality if the following screening criteria are met:

1. The project is below the applicable screening level size (Table 1).
2. All Best Management Practices would be included in the project design and implemented during construction.
3. Construction-related activities would not include any of the following:
 - a) Demolition activities inconsistent with District Regulation 11, Rule 2: Asbestos Demolition, Renovation, and Manufacturing;
 - b) Simultaneous occurrence of more than two construction phases;
 - c) Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site), (not applicable to high density infill development);
 - d) Extensive site preparation (i.e., greater than default assumptions used by the California Emissions Estimator Model (CalEEMod) for grading, cut/fill, or earth movement); or
 - e) Extensive material transport (e.g., greater than 10,000 cubic yards (cy) of soil import/export) requiring a considerable amount of haul truck activity.

Table 1: Construction Criteria Air Pollutants and Precursors Screening Level Sizes

Land Use Type	Construction-Related Screening Size	Project Size	Project Percent of Screening Size
Condo/townhouse, general	240 du	49 du	20.4%
Congregate Care Facility	240 du	49 du	20.4%
Note: du = dwelling units Source: BAAQMD 2017 ¹⁴ .			

¹⁴ Bay Area Air Quality Management District (BAAQMD). 2017. California Environmental Quality Act Air Quality Guidelines. May. Website: http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed May 22, 2017.

The Project does not meet all of the BAAQMD’s screening requirements. Therefore, the Project cannot be deemed less than significant using the screening method, and Project construction emissions must be compared with the BAAQMD significance thresholds. As shown in Table 1, the Project does not exceed the screening size for construction-related criteria air pollutants and precursors. However, the Project would export approximately 29,000 cubic yards of soil. The Project would exceed the 10,000-cubic-yard screening threshold for soil import or export during construction and therefore would trigger the need for additional analysis to determine the Project’s potential significance.

The Project’s annual construction emissions in each year are presented in Table 2 and converted to average pounds per day in Table 3. As shown in Table 3, the construction emissions for all years are well below the recommended thresholds of significance. Therefore, impacts from construction emissions would be less than significant. In addition, the Project would implement MM AIR-1 as recommended by the BAAQMD. As such, the dust control measures described above and BMPs that reduce fugitive dust emissions from the construction equipment will be incorporated into the Project to further reduce potential impacts.

Table 2: Annual Construction Emissions (Unmitigated)

Construction Phase	Tons/Year			
	ROG	NO _x	PM ₁₀ (Exhaust)	PM _{2.5} (Exhaust)
2018				
Site Preparation	0.01	0.12	0.01	0.01
Grading	0.08	1.32	0.04	0.04
Underground Utilities	0.05	0.55	0.03	0.03
Building Construction (2018)	0.26	1.86	0.11	0.11
<i>2018 Total Emissions</i>	<i>0.40</i>	<i>3.85</i>	<i>0.19</i>	<i>0.18</i>
2019				
Building Construction (2019)	0.12	0.88	0.05	0.05
Paving	0.01	0.12	0.01	0.01
Architectural Coating	0.49	0.02	0.00	0.00
<i>2019 Total Emissions</i>	<i>0.62</i>	<i>1.01</i>	<i>0.06</i>	<i>0.06</i>
Total Construction Emissions	1.02	4.86	0.25	0.23
Notes: ROG = reactive organic gases NO _x = oxides of nitrogen PM ₁₀ = particulate matter 10 microns in diameter PM _{2.5} = particulate matter 2.5 microns in diameter Calculations use unrounded numbers. Source: CalEEMod Output (See Appendix A).				

Table 3: Construction Emissions (Unmitigated Average Daily Rate)

Parameter	Air Pollutants			
	ROG	NO _x	PM ₁₀ ¹	PM _{2.5} ¹
Total Emissions (tons/yr)	1.02	4.86	0.25	0.23
Total Emissions (lbs/yr)	2,050	9,728	494	461
Average Daily Emissions (lbs/day) ²	5.65	26.80	1.36	1.27
Significance Threshold (lbs/day)	54	54	82	54
Exceeds Significance Threshold?	No	No	No	No

Notes:
¹ Exhaust only
² Calculated by dividing the total number of pounds by the total 363 working days of construction for the duration of construction (2018–2019).
 Calculations use unrounded totals.
 lbs = pounds ROG = reactive organic gases NO_x = oxides of nitrogen
 PM₁₀ = particulate matter 10 microns in diameter
 PM_{2.5} = particulate matter 2.5 microns in diameter
 Source: CalEEMod Output (See Appendix A).

Long-Term Operational Impacts

Generally, long-term operational emissions could result from Project-related traffic and through the routine use of landscape equipment and consumer products. Other sources of long-term operational emissions could result from occasional repainting of the buildings and use of natural gas. BAAQMD’s 2017 Guidelines provide guidance and screening criteria for determining if a project could potentially result in significant air quality impacts. As shown in Table 4, the Project would not result in operational-related air pollutants or precursors that would exceed BAAQMD’s thresholds of significance. The operational criteria pollutant screening size for a Congregate Care Facility is 657 units. The Project is well below BAAQMD’s screening threshold, indicating that ongoing Project operations would not be considered to have the potential to generate a significant quantity of air pollutants. Therefore, long-term operational impacts associated with criteria pollutant emissions would be less than significant.

Table 4: Operational Criteria Air Pollutants and Precursors Screening Level Sizes

Land Use Type	Operational Criteria Pollutant Screening Size	Project Size	Project Percent of Screening Size
Congregate Care Facility	657 du	49 du	7.5%
Condo/townhouse, general	451 du	49 du	10.9%

Note:
 du = dwelling units
 Source: BAAQMD 2017.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact with mitigation incorporated. BAAQMD considers a sensitive receptor to be any facility or land use that includes members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. If a project is likely to be a place where people live, play, or convalesce, it should be considered a receptor. It should also be considered a receptor if sensitive individuals are likely to spend a significant amount of time there. Examples of receptors include residences, schools and schoolyards, parks and play grounds, daycare centers, nursing homes, and medical facilities. Playgrounds could be play areas associated with parks or community centers. As an assisted living facility, the Project itself is a sensitive receptor. Additionally, there are sensitive residential buildings adjacent to the Project, including residences to the west and east of the Project along Thomas Lake Harris, and the Fountaingrove Lodge Retirement Center to the west of the Project.

Construction Period Toxic Air Contaminant Impacts

The proposed Project would implement the BAAQMD BMPs through the implementation of MM AIR-1. This includes requirements for reduced idling time and proper equipment maintenance for diesel equipment, which would reduce emissions from this equipment and therefore would reduce potential impacts to nearby receptors. However, residents located adjacent to the Project site and within the vicinity would be exposed to construction contaminants only for the duration of construction.

An assessment was made of the potential health impacts to surrounding sensitive receptors resulting from the emissions of toxic air contaminants (TACs) during construction. TACs are air pollutants present in miniscule amounts in the air that, if a person is exposed to them, could increase the chances of experiencing health problems. The TACs of greatest concern are those that cause serious health problems or affect many people. Health problems can include cancer, respiratory irritation, nervous system problems, and birth defects. Some health problems occur very soon after a person inhales a TAC. These immediate effects may be minor, such as watery eyes; or they may be serious, such as life-threatening lung damage. Other health problems may not appear until many months or years after a person's first exposure to the TAC. Cancer is one example of a delayed health problem.

Fine particle pollution or PM_{2.5} describes particulate matter that is 2.5 micrometers in diameter and smaller—one-thirtieth the diameter of a human hair. Fine particle pollution can be emitted directly or formed secondarily in the atmosphere. PM_{2.5} health impacts are important because their size can be deposited deeply in the lungs causing respiratory effects.

For purposes of this IS/MND, exhaust emissions of PM_{2.5} are represented as diesel particulate matter (DPM), a major component of PM_{2.5}. Studies indicate that DPM poses the greatest health risk among airborne TACs. A 10-year research program¹⁵ demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic long-term health risk. DPM differs from other TACs in that it is not a single substance but a

¹⁵ California Air Resources Board. 1998. The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines. Website: www.arb.ca.gov/toxics/dieseltac/factsht1.pdf. Accessed May 7, 2013 and May 26, 2017.

complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The California Air Resources Board (ARB) has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory’s PM₁₀ database, ambient PM_{2.5} monitoring data, and the results from several studies to estimate concentrations of DPM.

In addition to the DPM (as exhaust PM_{2.5} emissions), the construction of the Project would also result in emissions of fugitive dust primarily from earth-moving activities. During grading, in particular, the Project would involve the movement and removal of dirt to establish the proper drainage pattern and foundational requirements that would generate fugitive dust. As discussed in Impact 3b, BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. The Project would implement the BMPs recommended by BAAQMD, as required by MM AIR-1. Therefore, fugitive dust emissions during construction would be less than significant with mitigation. The health risk significance thresholds adopted for this assessment were derived from the BAAQMD significance thresholds as follows:

- Cancer Risk: 10 in one million
- Non-cancer Hazard Index: 1.0
- Annual PM_{2.5}: 0.3 µg/m³

Estimation of DPM (as PM_{2.5} Exhaust)

The PM_{2.5} construction emissions were estimated using the CalEEMod Land Use Emission Model (Version 2016.3.1). Table 5 summarizes the unmitigated annual construction emissions of PM_{2.5}.

Table 5: Project Annual PM_{2.5} Construction Emissions—No Mitigation

Year	On-site DPM (as PM _{2.5} Exhaust) (tons/year)	Off-site DPM (as PM _{2.5} Exhaust) ⁽²⁾ (tons/year)	Total PM _{2.5} (tons/year)
2018	0.1706	0.0002196	0.1708
2019	0.05502	0.00004724	0.05507

Air Dispersion Modeling

An air dispersion model is a mathematical formulation used to estimate the air quality impacts at specific locations (receptors) surrounding a source of emissions given the rate of emissions and prevailing meteorological conditions. The air dispersion model applied in this assessment was the United States Environmental Protection Agency (EPA) AERMOD (Version 16216r) air dispersion model that is approved for preparing air dispersion assessments. Specifically, the AERMOD model was used to estimate levels of TACs at sensitive receptor locations from the Project’s construction PM_{2.5} exhaust emissions. The use of the AERMOD model provides a refined methodology for

estimating construction impacts by utilizing long-term measured, representative meteorological data for the Project site and a representative construction schedule.

A total of two emission sources were used to represent the Project's PM_{2.5} on-site and off-site construction emissions within the air dispersion model. One source represented the generation of on-site construction DPM exhaust emissions (as PM_{2.5} exhaust) from the off-road construction equipment. Generation of emissions from the on-site construction emission source was assumed to cover a construction area of approximately 4.14 acres, which represents approximately 34 percent of the entire Project site. The remainder of the Project site was assumed to remain as undisturbed open space. An additional emission source was included to account for the off-site DPM (as PM_{2.5}) emissions worker, haul truck, and vendor truck construction vehicles. Construction vehicles were assumed to travel from the Project site along Thomas Lake Harris Drive and Fountaingrove Parkway to US 101. Full construction assumptions are available in Appendix A.

Receptor locations within the AERMOD model were placed at locations of existing residences surrounding the Project. The air dispersion model assessment used meteorological data from the Sonoma County Airport for the time period of January of 2009 to January of 2014.

Estimation of Cancer Risks

The BAAQMD has developed a set of guidelines¹⁶ for estimating cancer risks that provide adjustment factors that emphasize the increased sensitivities and susceptibility of young children to exposures to TACs. These adjustment factors include age-sensitivity weighting factors, age-specific daily breathing rates, and age-specific time-at-home factors. The recommend method for the estimation of cancer risk is shown in the equations below with the cancer risk adjustment factors provided in Table 6 for various sensitive/residential receptors (infant, child, and adult) over the construction time period.

$$\text{Cancer Risk} = (C_{\text{DPM}} \times \text{Inhalation Exposure Factor})$$

Where:

Cancer Risk = Total individual excess cancer risk defined as the cancer risk a hypothetical individual faces if exposed to carcinogenic emissions from a particular source for specified exposure durations; this risk is defined as an excess risk because it is above and beyond the background cancer risk to the population; cancer risk is expressed in terms of risk per million exposed individuals.

C_{DPM} = Period average DPM air concentration calculated from the air dispersion model in $\mu\text{g}/\text{m}^3$

Inhalation is the most important exposure pathway to impact human health from DPM and the inhalation exposure factor is defined as follows:

$$\text{Inhalation Exposure Factor} = \text{CPF} \times \text{EF} \times \text{ED AAF/AT}$$

¹⁶ BAAQMD 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines. Website: http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en.

Where:

CPF = Inhalation cancer potency factor for the TAC: $1.1 \text{ (mg/kg-day)}^{-1}$ for DPM

EF = Exposure frequency (days/year)

ED = Exposure duration (years)

AAF = set of age-specific adjustment factors that include age sensitivity factors (ASF), daily breathing rates (DBR), and time at home factors (TAH)—see Table 6.

AT = Averaging time period over which exposure is averaged (days)

Table 6: Exposure Assumptions for Cancer Risk

Receptor Type	Exposure Frequency		Exposure Duration (years)	Age Sensitivity Factors (ASF)	Time at Home Factor (TAH) (%)	Daily Breathing Rate (DBR) ⁽¹⁾ (l/kg-day)
	Hours/day	Days/year				
Sensitive/Residential—Infant						
3 rd Trimester	24	350	0.25	10	85	361
0–2 years	24	350	1	10	85	1,090
Sensitive Receptor—Child						
3–16 years	24	350	1	3	73	572
Sensitive Receptor—Adult						
> 16 years	24	350	1	1	72	261
Notes:						
⁽¹⁾ The daily breathing rates recommended by the BAAQMD for sensitive/residential receptors assume the 95 th percentile breathing rates for all individuals less than 2 years of age and 80 th percentile breathing rates for all older individuals.						
(l/kg-day) = liters per kilogram body weight per day						
Source: BAAQMD 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines. Website: http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en .						

Estimation of Non-Cancer Hazards

An evaluation of the potential non-cancer effects of chronic chemical exposures was also conducted. Adverse health effects are evaluated by comparing the annual receptor concentration of each chemical compound with the appropriate reference exposure limit (REL). Available RELs promulgated by the California Office of Environmental Health Hazards Assessment (OEHHA) were considered in the assessment.

To quantify non-carcinogenic impacts, the hazard index approach was used.

$$HI = C_{ann}/REL$$

Where:

HI = chronic hazard index

C_{nn} = annual average concentration of TAC as derived from the air dispersion model ($\mu\text{g}/\text{m}^3$)

REL = reference exposure level above which a significant impact is assumed to occur ($\mu\text{g}/\text{m}^3$)

The hazard index assumes that chronic sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). For each discrete chemical exposure, target organs presented in regulatory guidance were used. To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity reference exposure level. For compounds affecting the same toxicological endpoint, this ratio is summed. Where the total equals or exceeds 1, a health hazard is presumed to exist. For purposes of this assessment, the TAC of concern is DPM for which the OEHHA has defined a REL for DPM of 5 µg/m³. The principal toxicological endpoint assumed in this assessment was through inhalation.

Estimation of PM_{2.5} Hazards

The BAAQMD has included significance thresholds for PM_{2.5} from recent studies that show health impacts from exposure to this pollutant. The construction emissions of PM_{2.5} incorporated into this assessment is represented as DPM (as PM_{2.5} exhaust).

Estimates of Health Risks and Hazards from Project Construction

The estimated health and hazard impacts at the maximum impacted sensitive receptor from the Project’s construction emissions are provided in Table 7. The maximum impacted sensitive receptor (MIR) was found at an existing residence located approximately 80 meters (264 feet) northeast of the Project across Thomas Lake Harris Drive. As noted from Table 7, the Project’s construction DPM emissions would exceed the cancer risk significance thresholds adopted for this assessment at the maximum impacted sensitive infant receptors and thus would result in a significant impact to nearby sensitive receptors prior to the application of mitigation during construction.

Table 7: Estimated Health Risks and Hazards: Project Construction—No Mitigation

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index ⁽²⁾	Annual PM _{2.5} Concentration (µg/m ³)
Risks and Hazards at the Maximum Impacted Sensitive Receptor (MIR): Infant ⁽¹⁾	44.9	0.03	0.20
Risks and Hazards at the Maximum Impacted Sensitive Receptor (MIR): Child ⁽¹⁾	6	0.03	0.20
Risks and Hazards at the Maximum Impacted Sensitive Receptor (MIR): Adult ⁽¹⁾	0.9	0.03	0.20
BAAQMD Significance Threshold	10	1	0.30
Exceeds Individual Source Threshold?	Yes for Infant Receptors	No	No

Notes:
⁽¹⁾ Maximum impacted sensitive receptor is a residence located approximately 80 meters (264 feet) northeast of the Project across Thomas Lake Harris Drive.
⁽²⁾ Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as PM_{2.5} exhaust) by the REL of 5 µg/m³.
 Source: Appendix A.

Mitigation Measures

MM AIR-2, described below, is required to reduce the Project’s cancer risks to less than significant levels. MM AIR-2 would require that all Project diesel-powered construction equipment meet or exceed the United States Environmental Protection Agency (EPA) Tier 4 off-road emissions standards. Table 8 summarizes the Project’s construction PM_{2.5} emissions after the application of mitigation.

Table 8: Project Annual PM_{2.5} Construction Emissions (with Tier IV Mitigation)

Year	On-site DPM (as PM _{2.5} Exhaust) (tons/year)	Off-site DPM (as PM _{2.5} Exhaust) ⁽²⁾ (tons/year)	Total PM _{2.5} (tons/year)
2018	0.01347	0.0002196	0.01369
2019	0.00593	0.00004724	0.005977

Table 9 presents the Project’s cancer risks for the Infant sensitive receptor after application of mitigation. As noted from Table 9, the maximum infant cancer risk is 4.1 in one million, less than the cancer risk significance threshold of 10 in one million. Therefore, impacts would be less than significant with implementation of MM AIR-2.

Table 9: Estimated Health Risks and Hazards: Project Construction—(with Tier IV Mitigation)

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index ⁽²⁾	Annual PM _{2.5} Concentration (µg/m ³)
Risks and Hazards at the Maximum Impacted Sensitive Receptor (MIR): Infant ⁽¹⁾	4.1	0.0	0.0
Risks and Hazards at the Maximum Impacted Sensitive Receptor (MIR): Child ⁽¹⁾	1	0.0	0.0
Risks and Hazards at the Maximum Impacted Sensitive Receptor (MIR): Adult ⁽¹⁾	0.10	0.0	0.0
BAAQMD Significance Threshold	10	1	0.30
Exceeds Individual Source Threshold?	No	No	No
Notes: ⁽¹⁾ Maximum impacted sensitive receptor is a residence located approximately 80 meters (264 feet) northeast of the Project across Thomas Lake Harris Drive. ⁽²⁾ Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as PM _{2.5} exhaust) by the REL of 5 µg/m ³ . Source: Appendix A.			

Cumulative Impact Analysis

The BAAQMD recommends assessing the potential cumulative impacts from sources of TACs within 1,000 feet of a Project. There are no stationary sources, major roads (Fountain Grove Parkway) and railroads located within 1,000 feet of the Project site. In addition, the closest highway (U.S. 101) is approximately 4,500 feet west of the Project site. Therefore, considering the distance between the

potential cumulative impacts sources and the Project site, the Project's construction DPM emissions would not result in a significant cumulative health risk impact.

Project as a Receptor

The Project is locating new sensitive receptors (residents) that could be subject to existing sources of TACs. However, in a 2016 decision, the California Supreme Court concluded in *California Building Industry Association v. Bay Area Air Quality Management District* that agencies subject to CEQA are generally not required to analyze the impact of existing environmental conditions on a project's future users or residents. Therefore, impacts from existing sources of TAC emissions on sensitive receptors who would reside within the future Project are not subject to CEQA. As an assisted living facility, the Project itself is considered a sensitive receptor; therefore, potential TAC risks to the Project's future residents are analyzed for informational purposes.

Long-term Operational Impacts

When siting a new receptor, the existing or future proposed sources of TACs and PM_{2.5} emissions that would adversely affect individuals within the Project were examined, including:

- The extent to which existing sources would increase risk levels, hazard index, and/or PM_{2.5} concentrations near the planned receptor.
- Whether the existing sources are permitted or non-permitted by BAAQMD.
- Whether there are freeways or major roadways near the planned receptor.

BAAQMD recommends that lead agencies identify all TAC and PM_{2.5} sources located within a 1,000-foot radius of a project. A lead agency should enlarge the 1,000-foot radius on a case-by-case basis if an unusually large source or sources of risk or hazard emissions that may affect a project is beyond the recommended radius. Permitted sources of TAC and PM_{2.5} should be identified and located, as should freeways, major roadways, and other potential sources.

The operational analysis used the methodology in BAAQMD's Recommended Methods for Screening and Modeling Local Risks and Hazards:

- The project site is approximately 4,500 feet from U.S. Route 101, which is outside the 1,000-foot radius for the project site.
- The project site is approximately 2,300 feet from Fountaingrove Parkway, which is outside the 1,000-foot radius for the project site.
- There are no stationary sources within the 1,000-foot radius of the project site.

Based on the above, the Project would not be exposed to substantial pollutant concentrations; therefore, long-term operational impacts associated with exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

e) Create objectionable odors affecting a substantial number of people?

Less than significant impact. As stated in the BAAQMD 2017 Air Quality Guidelines, odors are generally regarded as an annoyance rather than a health hazard and the ability to detect odors varies considerably among the populations and overall is subjective.

The BAAQMD does not have a recommended odor threshold for construction activities. However, BAAQMD recommends screening criteria that are based on distance between types of sources known to generate odor and the receptor. For projects within the screening distances, the BAAQMD has the following threshold for project operations:

An odor source with five (5) or more confirmed complaints per year averaged over three years is considered to have a significant impact on receptors within the screening distance shown in Table 3-3 [of the BAAQMD's guidance].

Project Construction

Diesel exhaust and VOCs would be emitted during construction of the Project, which are objectionable to some; however, emissions would disperse rapidly from the Project site and therefore would not create objectionable odors affecting a substantial number of people. As such, construction odor impacts would be less than significant.

Project Operation

Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The Project does not contain land uses typically associated with emitting objectionable odors. During operation of the Project, odors would primarily consist of vehicles traveling to the site. These occurrences would not produce significant odors; therefore, operational impacts would be less than significant.

Mitigation Measures

- MM AIR-1** The following Best Management Practices (BMPs), as recommended by the BAAQMD, shall be included in the Project design and implemented during construction:
- a. All active construction areas shall be watered at least two times per day.
 - b. All exposed non-paved surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and access roads) shall be watered at least three times per day and/or non-toxic soil stabilizers shall be applied to exposed non-paved surfaces.
 - c. All haul trucks transporting soil, sand, or other loose material off-site shall be covered and/or shall maintain at least 2 feet of freeboard.
 - d. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
 - e. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

- f. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- g. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of CCR). Clear signage regarding idling restrictions shall be provided for construction workers at all access points.
- h. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- i. The prime construction contractor shall post a publicly visible sign with the telephone number and person to contact at the BAAQMD regarding dust complaints. BAAQMD and the construction contractor shall take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

MM AIR-2

The developer or Project Applicant shall ensure all off-road construction equipment in excess of 50 horsepower used on-site by the developer or contractors is equipped with engines meeting the EPA Tier IV off-road engine emission standards. The construction contractor shall maintain a log of equipment use at the construction site with make, model, serial number, and certification level of each piece of construction equipment that will be available for review by City building inspection staff.

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

Environmental Evaluation

This section evaluates potential effects on biological resources that may result from Project implementation. Descriptions and analysis in this section are based upon results of CDFW’s California Natural Diversity Database (CNDDB) and the United States Fish and Wildlife Service (USFWS) database searches (as cited in Appendix B), an Arborist’s Report prepared by Becky Duckles, ISA Certified Arborist, and a reconnaissance-level biological resources survey completed by FCS on August 29, 2016.

Would the Project:

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

Less than significant impact with mitigation incorporated. For the purpose of this analysis, special-status species refers to all species formally listed as threatened and/or endangered under ESA or CESA; California Species of Special Concern; designated as Fully Protected by CDFW; given a status of 1A, 1B, or 2 by California Native Plant Society (CNPS); or designated as special-status by city, county, or other regional planning documents. Federal and state listed threatened and/or endangered species are legally protected under ESA/CESA. The designated special-status species listed by CNPS have no direct legal protection, but require an analysis of the significance of potential impacts under CEQA guidelines.

The Project site located in Sonoma County in the City of Santa Rosa and is situated in a diverse landscape. The Project site itself is adjacent to Fountaingrove Golf and Athletic Club with Fountaingrove Lake bordering a portion of the southeastern part of the site. Portions of the golf course surround much of the Project site. Existing land uses in the vicinity of the Project site include Thomas Lake Harris Open Space, Nagasawa Community Park, and the Oakmont of Varena luxury retirement community. The Project site itself is undeveloped, with no existing structures. Access to the Project site and the proposed development would be from Gullane Drive, through a small residential area, east of the Project site.

The Project site sits on steep hilly terrain ranging from 500 feet to 575 feet above sea level. The biological community on-site consists of a mixed coast live oak (*Quercus agrifolia*) and California bay laurel (*Umbellularia californica*) woodland.

Coastal Oak Woodland

Oak-bay woodland is the dominant terrestrial habitat type and includes coast live oak and California bay (*Umbellularia californica*) as the dominant species. California black oak (*Quercus kelloggii*), valley oak (*Quercus lobata*) and Douglas fir (*Pseudotsuga menziesii*) trees also occur within this woodland habitat on the Project site. Coastal oak woodlands can be highly variable in species composition, with an overstory that consists of deciduous and evergreen hardwoods. From Sonoma County south, Coastal Oak Woodlands are usually dominated by Coast live oak and in many coastal regions, coast live oak is the only overstory species. In mesic sites, trees characteristic of mixed evergreen forests mix with coast live oak, such as California bay, madrone, tanbark oak, and canyon live oak. Typical species in dense coast live oak woodlands are shade tolerant shrubs such as California blackberry (*Rubus ursinus*), creeping snowberry (*Symphoricarpos mollis*), toyon (*Heteromeles arbutifolia*), and herbaceous plants such as bracken fern (*Pteridium aquilinum* var. *pubescens*), California polypody (*Polypodium californicum*), fiesta flower (*Pholistoma auritum*), and miner's lettuce (*Claytonia perfoliata*). However, understory shrubs on-site were scarce. Wild oats (*Avena occidentalis*), various brome species (*Bromus* spp.), and barley species (*Hordeum* spp.) dominate the groundcover of the woodland habitat on-site. Portions of the hillsides consist of metavolcanic rock fragment outcroppings.

Coastal oak woodlands provide habitat for a variety of wildlife species including various avian species such as California quail (*Callipepla californica*), wild turkeys (*Meleagris gallopavo*), hawks (*Accipiters*) and mammals such as California ground squirrels (*Spermophilus beecheyi*) and deer species (*Odocoileus* spp.).

Special-status plant and wildlife species typically occur in undeveloped areas. Although less likely, it is also possible for them to occur within developed areas. Although the Project site is an undeveloped Oak woodland habitat, it is surrounded by land that has been developed or disturbed, including disturbed soils, and the presence of invasive and non-native plant species. Recorded occurrences within 1-mile radius of the Project site are presented in Exhibit 8.

Special-Status Plant Species Potentially Occurring within the Project Site

A plant's potential to occur on the Project site was based on the presence of suitable habitats, soil types, and occurrences recorded by the USFWS, CNPS or CNDDDB in the Project region, and on observations made during the August 29, 2016 site survey. Based on the database searches and field observations, potential habitat suitability was determined for three special-status plant species within the Project site. Potential impacts occurring to special-status species would be significant if they were found to be present on the site. These species are described in Table 10. Blooming periods are noted because floristic surveys of the Project site need to be conducted during the proper blooming times so that planning for Project construction and operations can avoid special-status plant species.

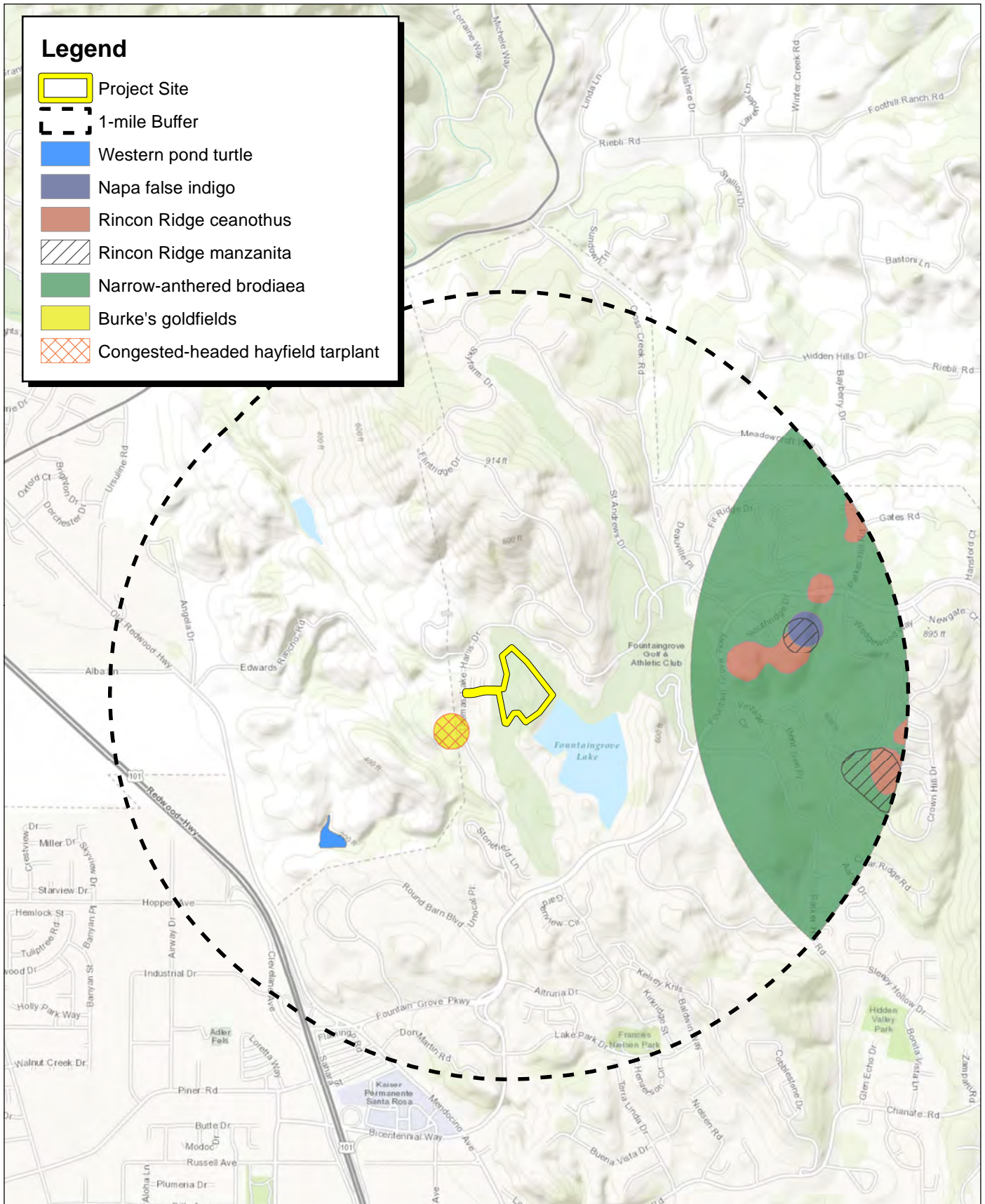
Construction of the proposed Project could result in direct loss of these special-status plant species, if they are present, through earthmoving activities. In addition to direct impacts, indirect impacts to special-status plant species could occur through degradation of habitat due to temporary construction impacts, the introduction of invasive or non-native plant species, the placement of paving and infrastructure, and increased human activity within the Project site attributable to Project operations. Impacts would be potentially significant. MM BIO-1a, described below, would reduce impacts to special-status plants to less than significant.

Special-Status Wildlife Species Potentially Occurring within the Project Site

Based upon the types of habitat that each special-status wildlife species occupies, and on observations made during the August 29, 2016 site survey, each wildlife species was evaluated for its potential to occur within the Project site. There were no federally listed, state listed special-status species or sensitive species identified as having the potential to occur within the Project site. However, trees within and adjacent to the Project site provide potential habitat for special-status bird and bat species, as well as non-special status migratory raptors and passerine bird species protected by the Migratory Bird Treaty Act (MBTA). No special status wildlife species were found during the field survey on August 29, 2016.

Table 10: Special-status Plant Species Potentially Occurring within the Project

Scientific Name Common Name	Regulatory Status			Habitat Description ⁴	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS ¹	CDFW ²	CNPS ³			
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	—	—	1B.2	Dicot shrub found in broadleaved upland forest, chaparral, cismontane woodland. Prefers openings in forest or woodland or in chaparral. Bloom period: April–July 120–2,000 m	Potential to occur: Suitable habitat is present within the Project site. Recorded occurrences are within 1 mile of the Project.	Yes
<i>Brodiaea leptandra</i> narrow-anthered brodiaea	—	—	1B.2	Monocot perennial herb found in broad-leaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Volcanic substrates. Bloom period: May–July 110–915 m.	Potential to occur: suitable habitat is present within the Project site. Recorded occurrences are within 1 mile of the Project.	Yes
<i>Ceanothus purpureus</i> holly-leaved ceanothus	—	—	1B.2	Dicot shrub found in chaparral, and cismontane woodland on rocky volcanic habitats. Bloom period: February–June 145–780 m.	Potential to occur: suitable habitat is present within the Project site. Recorded occurrences are within 1 mile of the Project.	Yes



Source: CNDDDB, September, 2016



Exhibit 8
CNDDDB Occurrences within
1-mile of Project Site

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Construction activities could disturb nesting and breeding birds in trees and shrubs near the construction site. Potential impacts on special-status and migratory birds that could result from the construction and operation of the Project include the destruction of eggs or occupied nests, mortality of young, and the abandonment of nests with eggs or young birds prior to fledging. Impacts on special-status bat species could result from increased noise due to Project construction and operation, or through a reduction of habitat. If these species were found to be present, impacts to these species would be significant. MM BIO-1b would reduce impacts to migratory and nesting raptors protected under the MBTA to less than significant, and MM BIO-1c would reduce impacts to special-status bat species to less than significant. These mitigation measures are included at the end of this section.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Less than significant impact with mitigation incorporated.

Coastal Oak Woodland Habitat

Coastal Oak Woodland is considered a special-status natural community. In general, “special-status natural communities” include those communities that are of limited distribution statewide or within a county or region; communities that are of special concern to resource agencies; and communities that, because they are vulnerable to the environmental effects of projects, are assessed or protected under CEQA Section 1600 of the California Fish and Game Code, and/or Section 404 of the Clean Water Act, among others. The most current version of the CDFW’s List of Vegetation Alliances and Associations (or Natural Communities List) (2010) indicates which natural communities are considered “special-status” in the State of California.

Coastal Oak Woodland occurs on a majority of the Project site. Coastal Oak Woodland has high habitat value for native wildlife and is targeted for protection in the Sonoma County General Plan because it continues to decline regionally. The proposed Project would result in the loss of coastal Oak Woodland through the removal of individual oak trees.

The loss of oak woodland and associated common wildlife is significant because this biological community is classified as a sensitive community. Therefore, this impact is potentially significant. MM BIO-2, described below, would reduce impacts to coastal Oak Woodland to less than significant.

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

No impact. No wetlands or aquatic features are present within the Project site. Fountaingrove Lake is located southwest of the Project site, and the proposed Project plans include specific design features to satisfy and adhere to the regulatory policies pertaining to stormwater runoff and water quality. Therefore, the Project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act.

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?**

Less than significant impact with mitigation incorporated.

The following wildlife species were observed during the field survey on August 29, 2016: western scrub jay (*Amphelocoma coerulescens*), western fence lizard (*Sceloporus occidentalis*), oak titmouse (*Baeolophus inornatus*), and Cooper's hawk (*Accipiter cooperii*). Although the Project site may offer a corridor for native wildlife migrating through, the site is limited in size when compared with surrounding open space, and loss of movement habitat to resident wildlife would be less than significant.

Furthermore, as discussed in above, the Project may have adverse effects on bat species, nesting birds and raptors, including special-status bird species protected under the MBTA. MM BIO-1b and MM BIO-1c would reduce these impacts to less than significant.

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

Less than significant impact with mitigation incorporated. Implementation of the Project would potentially conflict with applicable City policies and ordinances protecting biological resources because of tree removal, as identified in the previous impact discussions regarding special-status species and sensitive communities; this is a potentially significant impact.

The City of Santa Rosa's tree ordinance, contained at Municipal Code Chapter 17-24, applies to any tree having a diameter breast height (DBH) of 4 inches or more. Of the 917 existing trees located within the Project site, approximately 304 would be removed during Project construction. Becky Duckles, ISA Certified Arborist, prepared an Arborist Report and Tree Protection Plan (April 2017) included in Appendix B. The report provides an inventory and evaluation of all trees over 4 inches in diameter (at 54 inches above grade, unless noted otherwise) which might be impacted by proposed construction activities on the site. An assessment of the best tree candidates for preservation was completed by the arborist and will continue to refine details to protect the trees to be preserved.

In order to maintain consistency with the City's tree ordinance, MM BIO-3, described below, is recommended to reduce impacts related to the removal of on-site trees to less than significant, and as discussed above in MM BIO-2, would reduce impacts to Coastal Oak Woodland to a less than significant level.

- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

No impact. The Project site is not located within the area of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state HCP. Therefore, the proposed Project would result in no impact related to conflicts with an adopted HCP, NCCP, or other approved local, regional, or state HCP. No mitigation is required.

Mitigation Measures

MM BIO-1a Special-Status Plants

Prior to any vegetation removal or ground-disturbing activities, focused botanical surveys shall be conducted to determine the presence of special-status plant species Napa false indigo, narrow-anthered brodiaea and holly-leaved ceanothus, which have the potential to occur in the Project Study Area (Project site). Surveys shall be conducted in accordance with Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFG 2009). These guidelines require plant surveys to be conducted at the proper time of year when the species are both “evident” and identifiable. Field surveys shall be scheduled to coincide with known blooming periods, and/or during periods of physiological development that are necessary to identify the plant species of concern. If no special-status plant species are found within the Project site, then the Project will not have any impacts to the species and no additional mitigation measures are necessary.

1. If focused surveys indicate that special-status plant species are present within the Project site, the Project proponent shall evaluate the feasibility of reconfiguring the Project design in order to avoid or minimize impacts to special-status plant species. In addition to avoiding direct impacts to special-status plant species, potential indirect, Project construction and operation impacts shall be minimized to the maximum extent feasible through means that include but are not limited to the installation of protective fencing and environmentally sensitive area signage. Additionally, a Worker Environmental Awareness Program shall be implemented to educate construction workers about the presence of special-status species or other sensitive resources, including special-status plant species in and near the Project site, and to instruct them on proper avoidance, and required measures and practices for protecting biological resources and contacts and procedures in case species are injured or encountered during construction.
2. If special-status plant species are found on-site and cannot be avoided, the applicant shall coordinate with the United States Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW), as applicable, to determine feasible impact minimization and mitigation measures for rare plants, which may include but are not limited to the following:
 - Habitat restoration to mitigate for unavoidable temporary construction impacts to special-status plant species habitat on-site.
 - Incorporating Project features designed to reduce ongoing impacts from Project operation, including controlling public access to avoided special-status plant species habitat remaining on-site.
 - In conjunction with academic institutions and/or regional native plant nurseries, a propagation program shall be developed for the salvage and transfer of special-status plant species populations from the Project site before the initiation of construction activities. Permits may be required from the

USFWS or CDFW that will ensure that certified biologists are involved in the propagation and transport of rare, threatened, or endangered plant species. (Note that propagation methods for the salvaged plant population must be developed on a case-by-case basis and must include the involvement of local conservation easements, preserves, and open space, where applicable.) The propagation of individual plant species must be performed at the correct time of year and successfully completed before the Project's construction activities eliminate or disturb the plants and habitats of concern.

- Efforts should be made to salvage portions of the habitat or plant populations that will be lost as a result of implementation of the proposed Project. In addition to salvaging special-status plant species themselves, salvage efforts shall include soil and seed-banks surrounding impacted plants, if doing so will not contribute to the spread of invasive or noxious plant species.
- Appropriate off-site conservation opportunities shall be identified and, if feasible, protected in perpetuity through the purchase of conservation easements and/or mitigation bank credits. The habitat value of off-site conservation areas shall be enhanced where feasible through means such as reducing grazing intensity and restricting off-road vehicle access. At a minimum, the acreage of off-site habitat conserved should exceed a 1:1 ratio of impacted rare plant habitat within the Project site. The ratio should increase depending on the rarity of the affected rare plant species, and the abundance of the rare plant habitat impacted.

MM BIO-1b Migratory Birds and Nesting Raptors

1. If construction or tree removal is proposed during the breeding/nesting season for local avian species (typically March 1 through August 31), a focused survey for active nests of raptors and migratory birds within and in the vicinity of (no less than 250 feet outside the Project boundaries, where possible) the Project site shall be conducted by a qualified biologist. Two surveys will be conducted, at least one (1) week apart, with the second survey occurring no more than two (2) days prior to tree removal. If no active nests are found, tree removal or construction activities may proceed.
2. If an active nest is located during pre-construction surveys, the United States Fish and Wildlife Service and/or the California Department of Fish and Wildlife (as appropriate) shall be notified regarding the status of the nest. Furthermore, construction activities shall be restricted to avoid disturbance of the nest until it is abandoned or the biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones or alteration of the construction schedule.

MM BIO-1c Special-Status Bats

1. To reduce construction-related impacts to special-status bat species, a bat survey shall be conducted between March 1 and July 31 by a qualified wildlife biologist

in the year prior to ground disturbance. If no bat roosts are detected, then no further action is required.

2. If a colony of bats is found roosting on-site, then the following mitigation will be implemented to reduce the potential disturbance:
 - If a female or maternity roost of bats is found on the Project site, a wildlife biologist through coordination with CDFW shall determine what physical and timed buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after July 31 and before March 1).

MM BIO-2 Oak Woodland Habitat

The following mitigation measures for impacts to oak woodland habitat shall be implemented:

1. Where it is feasible to avoid protected trees, keep vehicles and mechanical equipment outside the dripline of these trees. In areas where oaks or other protected trees cannot be avoided, replace trees removed with the same native tree species at a minimum 3:1 ratio, or as required by the following applicable ordinance:

The City of Santa Rosa's tree ordinance, City Code Ch. 17-24, Ord. 2858, applies to any tree having a diameter breast height (DBH) of 4 inches or more, and includes the following species: big leaf maple (*Acer macrophyllum*), black oak (*Quercus kelloggii*), blue oak (*Quercus douglasii*), Coast live oak (*Quercus agrifolia*), interior live oak (*Quercus wislizenii*), madrone (*Arbutus menziesii*), oracle oak (*Quercus morehus*), Oregon oak (*Quercus garryana*), redwood (*Sequoia sempervirens*), Valley oak (*Quercus lobata*), and California bay (*Umbellularia California*).

2. The Project applicant shall conduct monitoring for 3 years following planting to verify that trees have successfully re-established.

MM BIO-3 To minimize impacts to existing trees and from the loss of 304 of trees scheduled for removal during Project construction, the Project applicant shall implement the following:

1. No parking, storage of materials, disposal of any waste materials, or unnecessary operation of equipment shall occur within the driplines of trees to remain.
2. If pruning for clearance is required on any trees to remain, it shall be conducted by trained, qualified tree workers according to International Society of Arboriculture and American National Standards Institute's Pruning Guidelines. Pruning should be the minimum necessary for hazard reduction, (e.g., the removal of deadwood 2 inches and larger), and clearance. Project arborist shall meet with tree service contractor prior to work to discuss limits and goals of pruning.

3. Care shall be taken to avoid damaging trunks or branches of protected trees. Where necessary, trunks shall be wrapped with thick layers of burlap or straw wattle for protection.
4. The Project arborist shall be notified a minimum of 24 hours in advance to be present on-site during rough grading or trenching within the Tree Protection Zones of trees to be preserved, as designated on the plans. Tree protection fencing shall be installed and maintained in place throughout construction.
5. If any roots larger than 1 inch are encountered which cannot be preserved, they should be cut cleanly across the face of the root with a sharp saw. No treatment of the cut end is necessary. Backfill of the exposed cut roots shall be done as quickly as possible to prevent desiccation.
6. In areas where soil compaction within root zones of protected trees has occurred, loosening of soil surface shall be completed prior to final walkthrough of each area. Consult the Project manager or Project arborist for recommendations of technique.
7. Where practical, arbor mulch (chipped wood bark and foliage, 2-inch layer minimum) should be spread and retained under protected trees to serve as a permanent top dressing and mulch.
8. Replacement/replanting of a minimum of 1,188 15-gallon size trees within the Project site or other City-approved location or as approved through coordination with the City.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
5. Cultural Resources <i>Would the Project:</i>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

This section describes the existing cultural resources setting and potential effects from Project implementation on the Project site and its surrounding area. Descriptions and analysis in this section are based on information provided by the California Native American Heritage Commission (NAHC), Northwest Information Center (NWIC), National Register of Historic Places (NR), California Register of Historic Resources (CR), California Historical Landmarks (CHL) list, California Points of Historical Interest (CPHI) list, the California State Historic Resources Inventory, the UCMP Paleontological Database, and a pedestrian survey of the site conducted by FirstCarbon Solutions (FCS). The record search results, NAHC correspondence, historic and paleontological reports and pedestrian survey photographs are provided in Appendix C.

Northwest Information Center

In order to determine the presence or absence of cultural and historical resources within the proposed Project area, staff at the Northwest Information Center (NWIC), located at Sonoma State University in Rohnert Park, conducted a records search for the Project site and a 0.5-mile radius surrounding the site on September 6, 2016. The current inventories of the NR, the CR, the CHL, the CPHI list, and the California State Historic Resources Inventory (HRI) listings for Stanislaus and San Joaquin Counties were reviewed to determine the existence of previously documented local historical resources.

Results from the NWIC indicate that five resources (P-49-000481, P-49-001146, P-49-001752, P-49-004081, and P-49-004161) are on file within a 0.5-mile radius of the Project area. Of the five resources, none are located within the Project site. Two of the resources, P-49-000481 and P-49-001146 are prehistoric in nature, each consisting of an obsidian flake scatter adjacent to a creek. In addition, 11 area-specific survey reports (S-001778, S-013497, S-016455, S-023418, S-024982,

S-032199, S-032200, S-032770, S-032771, S-035929 and S-037608) are on file with the NWIC for the 0.5-mile search radius. Of the four previous surveys, S-037608 surveyed the southeastern edge of the Project site in 2010. S-001778 and S-032770 surveyed the Project site in its entirety in 1979 and 2006 respectively, indicating that the site has been extensively surveyed for cultural resources. NWIC records search results may be found in Appendix C-1.

Native American Heritage Commission (NAHC)

On August 16, 2016, FCS sent a request to the Native American Heritage Commission (NAHC) to review its sacred lands file search and to provide a list of Native American Representatives who may be interested in providing additional information on potential Tribal Cultural Resources (TCRs) within the Project area. On August 23, 2016, a response was received from the NAHC indicating that no sacred sites were listed as present in the Project area. The letter included a list of three Native American representatives. Letters including a map and Project details were sent to all representatives for informational purposes on August 30, 2016. On September 22, 2016, a letter was received from Tomaras and Ogas LLP, attorneys for the Lytton Rancheria of California. The letter indicated that the tribe had no specific information regarding cultural resources located within the Project area, but that such resources may exist, as the Project falls within the traditional territory of the Pomo. The letter stated that the tribe would be consulting further with the appropriate lead agency, and asked that all resources be noted in the report. As of this date, no additional correspondence has been received. Correspondence with the NAHC and Native American representatives may be found in Appendix C-2.

Pedestrian Cultural Resources Survey

FCS Senior Archaeologist Dana DePietro, PhD surveyed the Project area for cultural resources on August 18, 2016. The Project site is roughly circular in shape, and is located within Township 7 North, Range 8 West, Section 2 and Township 8 North, Range 8 West, Section 35 on the Santa Rosa quadrangle (1980) USGS 7.5-minute series topographic map. The location is completely surrounded by the Fountaingrove Golf Course on all sides, with Fountaingrove Lake to the southeast, and a residential development built along Thomas Harris Lake Drive to the west. The Project site is completely undeveloped, and covered with tall grasses, boulders and scrub oak trees. No buildings or structures are present at the site.

The survey began in the west of the Project site and moved east using north-south transects at 15-meter intervals whenever possible. Soil visibility was moderate, ranging from 30-60 percent across the site. Soils in sections of poor visibility were intermittently inspected using a hand trowel. Observed soils were largely composed of medium brown silt interspersed with large (20 to 30 centimeters [cm]) basalt and schist stones. An accumulation of larger stones ranging from 0.5 to 1.5 meters in diameter were observed in the center of the site at its highest elevation. These stones were closely inspected for signs of utilization in their distribution and appearance. None were found to have been modified and their distribution is consistent with a natural accumulation as opposed to a collapsed wall or stone structure.

Survey conditions were documented using digital photographs and field notes. During the survey, Dr. DePietro examined all areas of the exposed ground surface for prehistoric artifacts (e.g., fire-

affected rock, milling tools, flaked stone tools, tool-making debris, ceramics), soil discoloration and depressions that might indicate the presence of a cultural midden, faunal and human osteological remains, and features indicative of the former presence of structures or buildings (e.g., postholes, standing exterior walls, foundations) or historic debris (e.g., glass, metal, ceramics). Particular attention was paid to open areas across the site, as well as those located closer to water and natural resources. These areas were closely inspected for culturally modified soils or other indicators of potential historic or prehistoric resources.

No historic or prehistoric cultural resources or raw materials commonly used in the manufacture of tools (e.g., obsidian, Franciscan chert) were found within the Project site. These findings are consistent with the two prior surveys of the Project site in 1979 and 2006. Survey photographs may be found in Appendix C-3.

UCMP Paleontological Records Search

On August 20, 2016, consulting paleontologist Kenneth Finger, PhD performed a records search on the University of California Museum of Paleontology (UCMP) database for the Oakmont Emerald Isle Project. The Project lies within the geologic map of McLaughlin et al. (2008), which indicates that the surface of the Project area consists of Late Tertiary volcanic rocks (Tsb). There are two small areas of Pleistocene alluvium just southwest of the site.

Dr. Finger performed a records search of the University of California Museum of Paleontology (UCMP) database on August 20, 2016. The database lists no vertebrate localities for the Santa Rosa quadrangle. The nearest vertebrate locality is V1637 (Ritchie Creek), about 5 miles to the northeast, where tuffaceous agglomerate (likely Sonoma Volcanics) yielded a leg bone and molars of a Pliocene horse. A copy of Dr. Finger's report may be found in Appendix C-4.

Would the Project:

- a) **Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

Less than significant impact with mitigation incorporated. The results of the NWIC records search show that five cultural resources lie within 0.5 mile of the Project site. Of these resources, three are historic buildings or structures; however, none are located within or in close proximity to the site itself. Review of historical aerial photographs and topographic maps dating as early as 1919 shows no evidence of any buildings or structures at the site. Furthermore, complete surveys of the site conducted in 1979, 2006, and 2016 failed to reveal any buildings, structures, or other historic resources within the Project area itself. For these reasons, the potential for the proposed Project to have an adverse effect on historic resources is considered low.

While unlikely, subsurface construction activities always have the potential to damage or destroy previously undiscovered historic and prehistoric resources. Historic resources can include wood, stone, foundations, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, and other refuse. Accordingly, implementation of MM CUL-1 is recommended to reduce potential impacts to historic resources that may be discovered during Project construction.

With the incorporation of mitigation, impacts associated with historic resources would be less than significant.

b) Cause a substantial adverse change in the significance of an archaeological Resource (TCR) pursuant to §15064.5 or Public Resources Code 21074?

Less than significant impact with mitigation incorporated. Records search results from the NWIC indicate that five cultural resources lie within 0.5 mile of the Project site. Of these resources, two are prehistoric lithic scatters consisting of obsidian flakes and debitage. Both of these resources are associated with nearby streams located outside of the Project site. Intensive pedestrian surveys of the Project site conducted in 1979, 2006, and by FCS on August 8, 2016 also failed to identify additional archaeological resources or raw materials traditionally utilized in the production of those resources. The Project site is therefore considered to have moderate to low sensitivity for undiscovered archaeological resources.

While the extensive survey data indicates that the likelihood of encountering archaeological resources during Project construction is low, two lithic scatters in the general vicinity of the Project site increase the probability that subsurface excavation may encounter previously undiscovered archaeological resources. Such resources could consist of but are not limited to stone, bone, wood, or shell artifacts or features, including hearths and structural elements. Accordingly, this is a potentially significant impact. Implementation of MM CUL-1, described below, would ensure that this potential impact is reduced to a less than significant level.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than significant impact. Dr. Finger's report concluded that there are no potentially fossiliferous sedimentary deposits on or adjacent to the Project site. The volcanic rocks in the andesite-to-basalt series are extrusive and igneous, and they does not preserve fossils. The south-adjacent Pleistocene alluvium is younger and overlies the volcanics, so it would not be encountered in the subsurface of the Project site. Hence, the Project site has no paleontological potential and therefore no paleontological sensitivity. Neither a paleontological walkover survey prior to construction nor paleontological monitoring during construction-related excavations is warranted because the entire site is mapped as volcanic rock. No further mitigation for paleontological resources is required.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less than significant impact. No human remains or cemeteries are known to exist within or near the Project site. However, there is always the possibility that subsurface construction activities associated with the proposed Project, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is a potentially significant impact. However, in the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section 5097.98 must be followed. These regulations stipulate that in the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section 5097.98 must be followed. No further excavation or disturbance within 100 feet of the remains until the County

Coroner is contacted if remains are found. The lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98 for appropriate treatment and/or disposal. Therefore, in the unlikely event human remains are discovered, compliance with existing regulations, would reduce this potential impact to a less than significant level.

Mitigation Measures

MM CUL-1 An archaeologist who meets the Secretary of Interior’s Professional Qualification Standards for archaeology should be present during the initial phase of ground disturbance in order to check for the inadvertent exposure of cultural materials. This may be followed by regular periodic or “spot-check” archaeological monitoring during ground disturbance as needed, but full-time archaeological monitoring is not required at this time. In the event a potentially significant cultural resource is encountered during subsurface earthwork activities, all construction activities within a 100-foot radius of the find shall cease and workers should avoid altering the materials until an archaeologist has evaluated the situation. The Applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Potentially significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resource, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Any previously undiscovered resources found during construction within the Project site shall be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and will be submitted to the City of Healdsburg, the Northwest Information Center, and the State Historic Preservation Office (SHPO), if required.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
6. Geology and Soils <i>Would the Project:</i>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Evaluation

The site-specific information and analysis in this section is drawn from a Geotechnical Investigation Report conducted by Reese & Associates Consulting Geotechnical Engineers, dated September 21, 2016 and included in Appendix D. Reese & Associates provided a memo dated March 17, 2017 confirming the adequacy of the report subsequent to revised site plans developed after the initial report was prepared (see Appendix D).

The Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to establish regulatory zones known as earthquake fault zones around the surface traces of active faults and to issue

appropriate maps. The Seismic Hazards Mapping Act addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. The act resulted in a mapping program identifying areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards.

The Project site is located 0.28 mile west of the Rodgers Creek Fault, an active fault that is considered an extension of the Hayward fault. In the surrounding area, the Maacama Fault is located approximately 4.1 miles northeast and the San Andreas Fault is located approximately 20 miles southwest of the Project site. These and other active faults in the region are capable of causing significant ground shaking on the site. Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. The composition of underlying soils, even those relatively distant from faults, can intensify ground shaking. According to the Association of Bay Area Governments (ABAG) Liquefaction Susceptibility map, however, the Project site is located in a very low susceptibility area. Liquefaction is the process by which water-saturated soil materials lose strength and fail during strong seismic ground shaking.

The State of California has established minimum standards for building design through the California Building Code (CBC), which contain specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. The American Society of Civil Engineers (ASCE) has also published standards for minimum design loads for buildings in the 2010 ASCE-7 standards. The CBC also contains standards for grading activities, including drainage and erosion control (Chapter 18, Appendix J). The City of Santa Rosa has adopted the 2013 CBC and incorporated it into the Municipal Code. The Municipal Code also contains numerous other provisions intended to promote geotechnical and seismic safety, including construction limitations and requirements for geologic reports and building permits within earthquake fault zones (Title 17) as well as grading and soil requirements for structural foundations (Title 19).

The United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) has characterized the majority of native, undisturbed soils in Santa Rosa as clayey alluvial soils and riverwash, as well as some silty and gravelly soils and loams. Based on California Geological Survey (CGS) mapping, the Project area is underlain by the Sonoma Volcanics, sedimentary rocks comprising the Petaluma Formation, and alluvial deposits. The ABAG GIS Landslide Susceptibility map establishes that the Project site is located in a low risk susceptibility to landslide area.

Would the Project:

- a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

Less than significant impact. The Project site does not lie within an identified Alquist-Priolo fault zone. Geotechnical investigations conducted by Reese & Associated Consulting Geotechnical Engineers (Appendix D) concluded that while inactive faults have been mapped in the vicinity of the site, active faults known to have ruptured or experienced seismic activity within the past 11,000 years are not known to traverse the site. The nearest active fault is a trace of the Rodgers Creek Fault located 0.28 mile to the southwest. As concluded by Reese & Associated Consulting Geotechnical Engineers, based on limited data, it appears that the potential for coseismic ground deformations to occur in bedrock underlying the Project site is relatively low. Therefore, impacts would be less than significant.

- ii) **Strong seismic ground shaking?**

Less than significant impact with mitigation incorporated. The Project site could experience strong to violent ground shaking as a result of an earthquake on the Hayward-Rodgers Creek fault, as well as ground shaking associated with seismic activity on other regional faults. The intensity of ground shaking would vary with the distance and magnitude of the earthquake causing the ground shaking. According to Association of Bay Area Governments Hazards maps, Sonoma County has been categorized under the “Very Strong” shaking category. Therefore, to minimize the risk of loss, injury or death involving seismic shaking to the maximum extent practicable, implementation of MM GEO-1 is required, which would ensure that design of proposed structures is in conformance with the seismic provisions of the 2013 CBC and the recommendations of the Reese & Associates Geotechnical report dated September 21, 2016. Implementation of this measure would reduce impacts to a less than significant level.

- iii) **Seismic-related ground failure, including liquefaction?**

Less than significant impact. Based on a review of the interactive ABAG GIS Liquefaction Susceptibility map, the Project site is located within a very low liquefaction hazard area. Likewise, County of Sonoma Major Earthquake Faults & Areas of Liquefaction map does not identify the Project site within a very high, high, or medium liquefaction zone. The geotechnical report also concluded that clays susceptible to seismic softening do not underlie the site and therefore are not considered a hazard. Based on these conditions, the on-site soils have a low risk for potential liquefaction and impacts associated with liquefaction would be less than significant.

iv) Landslides?

Less than significant impact. As described in Section 1.4, the Project site is located in hilly terrain, adjacent to single-family residences and Fountaingrove Golf Course however, based on a review of the ABAG GIS Landslide Susceptibility map, the Project site is not located within a rainfall-induced landslide distribution area.¹⁷ The California Landslide Inventory from California Geological Survey (CGS) does not list the Project site under any landslide susceptibility criteria. The site plan (Exhibit 3) indicates that the proposed building would be set back at a minimum of 75 feet from the top of a steep, descending slope located in the southwest portion of the site, in compliance with previous geotechnical investigations completed by Giblin & Associates in 2006.¹⁸ Furthermore, implementation of CBC requirements contained in the Santa Rosa Municipal Code—including removing excess material from the upslope swales, reshaping the hillside profile to reduce the driving forces, lowering the slope gradient, and restricting water inflow into the soil mass—would reduce impacts to the maximum extent practicable. Therefore, impacts would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant impact. The Project site is located in hilly wooded terrain with natural outcroppings of rock throughout the site. As discussed in Appendix D, surface drainage is poorly defined with stormwater run-off from the site generally occurring as sheet flow. The site would be stripped of vegetation to a depth of 3 inches and substantial grading and excavation would be required for construction of the Project. As such, soil exposed by construction activities during development of the Project could be subject to erosion if exposed to heavy rain, winds, or other storm events. Grading and excavation would be required to comply with the applicable provisions of the Municipal Code, including requirements for grading and excavation contained in Title 18 Buildings and Construction as well as Chapter 20-32 Hillside Development Standards. The Project would require a hillside development permit. Compliance with applicable regulations would reduce the potential for erosion on-site from construction activities to the maximum extent practicable. Impacts related to erosion would be less than significant. Slope instability as a result of soil creep is addressed below under 3c).

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than significant impact with mitigation incorporated. As described above, the site is underlain at the surface by bedrock units of the Sonoma Volcanics and is not located in an area of seismic liquefaction potential; however, the upper soils on the west-facing slope on-site are undergoing soil creep. Creep is the gradual downslope movement of weak soil and soft rock, on the order of a fraction of an inch per year, under the force of gravity. Reese & Associates concluded that, because of the presence of relatively soft, wet tuffaceous sand overlain by expansive clay, it is likely that soil creep affects both the soil deposits as well as uppermost about one foot of rock. Creep soil

¹⁷ ABAG. 2017. Available: <http://gis.abag.ca.gov/website/Hazards/?hlyr=cgsLndslldZones>. Viewed April 21, 2017.

¹⁸ Reese & Associates Consulting Geotechnical Engineers, Geotechnical Investigation for the Emerald Isle Assisted Living, September 21, 2016, page 4.

movements can impose lateral loads on foundations, and contribute to differential settlement of slabs, walkways, roads and other Project improvements, and result in tilting, lateral displacement and/or more than normal cracking. Therefore, to address potential risks associated with soil stability on-site, implementation of MM GEO-2, described below is required. This measure would ensure that recommendations from the Reese & Associates Geotechnical report, dated September 21, 2016 would be implemented, including grading measures such as overexcavation of creep-affected soil and replacement as properly keyed, benched and compacted fill shall, as well as ensuring that the design of foundations and retaining walls shall resist lateral creep soil loads. With implementation of MM GEO-2, associated impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less than significant impact with mitigation incorporated. Geotechnical investigations conducted by Reese & Associates identified on-site soil deposits in the vicinity of the proposed building that are comprised of weak surface soils and expansive clays/silts and residual soils, with colluvium on the side slopes. In this area, the upper soils are generally thin, and form a veneer that obscures the bedrock. Test pit excavations within the proposed building area revealed about 12 to 18 inches of sandy silt with varying amounts of andesite rock fragments, cobbles and occasional boulders. These surface soils were observed to be porous, likely from prior cultivation and decomposition. The residual soils were generally observed in areas underlain by andesitic tuffbreccia (Tstb) and tuff (Tst). These residual soils consist of expansive clays and silts and are generally localized to the northwest portion of the proposed building area. Based on laboratory tests, the material is of moderate to high expansion potential, which is a measure of the tendency of soils to undergo strength and volume changes with seasonal variations in moisture content.

Soil investigations along the proposed new access roadway on the west-facing slope revealed a thin layer of soft, sandy silt topsoil underlain by very firm andesite breccia (Tsab). Extending downslope, the rock materials transition to a welded tuff. The soils observed between the topsoil and welded tuff become increasingly thicker and consist of medium dense tuffaceous sand with a significant fraction of silty/clayey fines. The tuffaceous sand was observed to be wet and underlain by a thin, discontinuous layer of expansive clay. No slickensides were observed at the contact between the tuffaceous sand and clay.

Weak, porous natural soils, such as those encountered at shallow depths throughout the site, would be subject to significant settlements when under load, particularly when saturated. Where evaporation is inhibited by slabs, footings, or fill, eventual saturation could occur. Expansive soils can undergo significant strength and volume changes with seasonal variations in moisture content and can heave and distress lightly loaded footings and slabs. Therefore, to address potential risks to life and property associated with soils on-site, implementation of MM GEO-3, is recommended, which ensures that recommendations of the Reese & Associates Geotechnical report regarding weak, porous soils and expansive soils on-site are implemented. Recommendations include that expansive soils encountered within building envelopes shall be removed for their full depth or covered with a moisture confining and protecting blanket of approved on-site or imported materials of low expansion potential prior to erection of structures. Additionally, for slab-on-grade support,

the Applicant shall verify that expansive soils have not dried and cracked. With implementation of MM GEO-3, impacts related to expansive soils would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No impact. The Project site is located in a residential area of the City of Santa Rosa that is served by the municipal sanitary sewer system. The Project would connect to a City of Santa Rosa existing sewer main. The Project would not use septic tanks or any alternative wastewater disposal system. Therefore, no impacts related to the use of septic tanks or alternative wastewater systems would occur.

Mitigation Measures

- MM GEO-1** Design of proposed structures on the site shall be done in conformance with the seismic provisions of the 2013 CBC and the recommendations of the recommendations of the Reese & Associates Geotechnical report dated September 21, 2016, including the parameters developed pursuant to a Risk-Targeted Maximum Considered Earthquake (MCfa) Ground Motion Hazard Analysis per ASCE 7-10 Section 21.2. A qualified geotechnical engineer shall review the final foundation and building plans to ensure conformance with the recommendations.
- MM GEO-2** Design and construction of fills, cuts, foundations, retaining walls and slabs shall recognize the presence of creep-affected soils and be done in compliance with the recommendations of the Reese & Associates Geotechnical report, dated September 21, 2016. Grading measures such as overexcavation of creep-affected soil and replacement as properly keyed, benched and compacted fill shall be implemented and foundations and retaining walls shall be designed to resist lateral creep soil loads. A qualified geotechnical engineer shall review the final grading and foundation plans to ensure conformance with the recommendations.
- MM GEO-3** The Applicant shall adhere to the recommendations of the Reese & Associates Geotechnical report regarding weak, porous soils and expansive soils on-site. Expansive soils encountered within building envelopes shall be removed for their full depth or covered with a moisture confining and protecting blanket of approved on-site or imported materials of low expansion potential prior to erection of structures. Additionally, for slab-on-grade support, the Applicant shall verify that expansive soils have not dried and cracked. The Applicant shall document completion of these actions and submit verification to the City prior to issuance of the certificate of occupancy.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
7. Greenhouse Gas Emissions <i>Would the Project:</i>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

The following analysis is based in part on CalEEMod modeling conducted by FCS and included in this IS/MND as part of Appendix A.

Would the Project:

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Less than significant impact. This analysis is restricted to greenhouse gases identified by Assembly Bill (AB) 32, which include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The Project would generate a variety of greenhouse gases during construction and operation, including several defined by AB 32 such as carbon dioxide, methane, and nitrous oxide.

The Project may also emit greenhouse gases that are not defined by AB 32. For example, the Project may generate aerosols. Aerosols are short-lived particles, as they remain in the atmosphere for about 1 week. Black carbon is a component of aerosol. Studies have indicated that black carbon has a high global warming potential; however, the Intergovernmental Panel on Climate Change states that it has a low level of scientific certainty.¹⁹ Water vapor could be emitted from evaporated water used for landscaping, but this is not a significant impact because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from Project-related activities. The Project would emit nitrogen oxides and volatile organic compounds, which are ozone precursors. Ozone is a greenhouse gas; however, unlike the other greenhouse gases, ozone in the troposphere is relatively short-lived and can be reduced in the troposphere on a daily basis. Stratospheric ozone can be reduced through reactions with other pollutants.

¹⁹ Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller [eds.]). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Website: www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html. Accessed April 25, 2016.

Certain greenhouse gases defined by AB 32 would not be emitted by the Project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the Project. Therefore, it is not anticipated that the Project would emit perfluorocarbons or sulfur hexafluoride.

An upstream emission source (also known as life cycle emissions) refers to emissions that were generated during the manufacture of products to be used for construction of the Project. Upstream emission sources for the Project include but are not limited to emissions from the manufacture of cement, emissions from the manufacture of steel, and/or emissions from the transportation of building materials to the seller. The upstream emissions were not estimated because they are not within the control of the Project and to do so would be speculative. Additionally, the California Air Pollution Control Officers Association White Paper on CEQA and Climate Change supports this conclusion by stating, “The full life-cycle of GHG [greenhouse gas] emissions from construction activities is not accounted for . . . and the information needed to characterize [life-cycle emissions] would be speculative at the CEQA analysis level.”²⁰ Therefore, pursuant to CEQA Guidelines Sections 15144 and 15145, upstream/life cycle emissions are speculative and no further discussion is necessary.

Short-Term Construction Impacts

During Project construction, greenhouse gases would be generated by construction activities such as site clearing/preparation and grading/earthwork, the operation of heavy-duty construction vehicles, materials and debris hauling, asphalt paving, and construction worker vehicle trips. These emissions would be considered short-term in duration. BAAQMD does not have an adopted threshold of significance for construction-related greenhouse gas emissions; however, BAAQMD does recommend that lead agencies quantify, disclose, and provide a significance determination for construction-related greenhouse gas emissions. Thus, the operational emissions threshold of 1,100 metric tons of carbon dioxide equivalents (MT CO₂e) per year is used for this analysis to determine significance of the Project’s construction-related emissions.

Construction emissions were estimated using CalEEMod version 2016.3.1. The timing for construction is approximately 12 to 15 months. In order to provide a conservative analysis, it was assumed that the Project would be built out within a single 14-month construction schedule. The Project is expected to start construction as early as March of 2018 and was assumed to be complete in May of 2019. The construction phases included site preparation, site grading, underground utilities, building construction, paving, and architectural coating. Table 11 shows the greenhouse gas emissions estimated to be generated by Project construction, indicating that the construction-related GHG emissions are below 1,100 MT CO₂e in each construction year. Therefore, construction-related GHG emissions would be less than significant on a project basis.

²⁰ California Air Pollution Control Officers Association. 2008. CEQA & Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. Available: <<http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>>. Accessed: December 18, 2011.

Table 11: Construction Greenhouse Gas Emissions

Construction Phases	Total Emissions (MT CO ₂ e/year)
2018	
Site Preparation	9.1
Site Grading	208.5
Underground Utilities	48.3
Building Construction (2018)	260.1
<i>2018 Construction Subtotal</i>	<i>526.0</i>
2019	
Building Construction (2019)	133.9
Paving	17.4
Architectural Coating	10.4
<i>2019 Construction Subtotal</i>	<i>161.7</i>
Maximum Annual Construction Emissions	526.0
Threshold of Significance	1,100
Does project exceed threshold?	No
Note: Calculations use unrounded numbers. Source: CalEEMod Output (see Appendix A)	

During Project construction, approximately 687.7 MTCO₂e would be emitted, which is less than the 1,100-MTCO₂e threshold applied for the purposes of this analysis. Therefore, short-term construction impacts associated with the generation of greenhouse gas emissions would be less than significant.

Long-term Operational Impacts

A preliminary screening method is provided in BAAQMD’s 2017 Guidelines for operational greenhouse gases. The preliminary screening is used to indicate whether a project’s operational greenhouse gases could potentially exceed BAAQMD’s thresholds of significance. Based on BAAQMD screening criteria, the operation of a congregate care facility would result in a less than significant impact if the Project comprises fewer than 143 dwelling units. As shown in Table 12, the Project is well below BAAQMD’s screening threshold, indicating that ongoing Project operations would not be considered to have the potential to generate a significant quantity of air pollutants. Therefore, long-term operational impacts associated with criteria pollutant emissions would be less than significant.

Table 12: Operational Greenhouse Gas Screening Level Sizes

Land Use Type	Operational Greenhouse Gas Screening Size	Project Size	Project Percent of Screening Size
Congregate care facility	143 du	49 du	34%
Condo/townhouse, General	78 du	49 du	63%
Note: du = dwelling units Source: BAAQMD 2017.			

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Less than significant impact. Significance for this impact is determined by Project compliance with the City of Santa Rosa Climate Action Plan (CAP).²¹ The CAP contains a compliance checklist for new development, which is used to determine compliance with the CAP, which is a qualified Greenhouse Gas Reduction Plan according to the BAAQMD’s 2017 guidelines. Project compliance with those policies and requirements are shown in Table 13. As shown in the table, the Project complies with applicable requirements.

The City of Santa Rosa adopted its CAP in June 2012. The CAP identifies policies that will achieve the state-recommended greenhouse gas reduction target of 15 percent below 2008 levels by the year 2020 and the locally adopted reduction goal of 25 percent below 1990 levels. The CAP provides goals, measures, and associated actions, in the topical areas of energy efficiency and conservation, renewable energy, parking and land use management, improved transport options, optimized vehicular travel, waste reduction, recycling and composting, water and wastewater, agriculture and local food, and off-road vehicles and equipment. Table 13 shows that the Project complies with the applicable policies and requirements.

The Project is consistent with the applicable local plans, policies and regulations and would not conflict with the provisions of AB 32, the applicable air quality plan, or any other state or regional plan, policy or regulation of an agency adopted for the purpose of reducing greenhouse gas emissions. As discussed in impact 7a), the Project would result in less than significant generation of greenhouse gases. In addition, the following measures identified in Table 13 are already included as part of the Project design or could be included, and would lessen the GHG emissions.

²¹ City of Santa Rosa. 2012. City of Santa Rosa Climate Action Plan. Website: http://ci.santa-rosa.ca.us/doclib/Documents/CDP_SR_FINAL_CAP_20120711.pdf. Accessed: February 2, 2015 and May 25, 2017.

Table 13: Project Compliance with Santa Rosa Climate Action Plan

Measure	Action Item	Project Compliance
<p>Energy Efficiency in Existing Buildings: Facilitate energy efficiency upgrades and retrofits in existing commercial, residential, and industrial buildings by connecting residents and businesses with technical and financial assistance.</p>	<p>Connect businesses and residents with voluntary programs that provide free or low-cost energy efficiency audits and financing assistance for energy efficient appliances.</p>	<p>Complies. Future residents could participate in voluntary programs that provide free or low-cost energy efficiency audits and financing assistance for energy efficient appliances. In addition, the Project would comply with the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce Project energy consumption.</p>
	<p>Work with the Sonoma County Energy Independence Program (SCEIP) to offer low-interest financing and technical assistance to property owners for energy efficiency retrofits.</p>	<p>Not directly applicable. The proposed Project consists of the construction and operation of a new assisted living facility.</p>
<p>Smart Meter Utilization: Encourage existing development and require new development to utilize PG&E’s Smart Meter system to facilitate energy and cost savings.</p>	<p>Require new construction and major remodels to install real-time energy monitors that allow building users to track their current energy use.</p>	<p>Complies. The Project would include real-time energy monitors in accordance with City standards.</p>
<p>Cool Roofs and Pavements: Require new sidewalks, crosswalks, and parking lots to be made of cool paving materials with a high solar reflectivity.</p>	<p>Adopt an ordinance that requires and specifies cool paving materials for new parking lots, sidewalks, roofs, and crosswalks and integrates Low Impact Development guidelines for new construction and Capital Improvement Projects.</p>	<p>Complies. The Project would be required to construct paved areas in accordance with City standards.</p>
	<p>Ensure the cool roof and paving ordinance includes cool roof specifications which allow for green or living roofs and address energy installations on historic structures consistent with the Secretary of Interior’s Rehabilitation Standards. Allow darker-color roofs when they meet cool roof standards.</p>	<p>Complies. The Project would construct buildings and paved areas in accordance with City standards.</p>
<p>Tree Planting and Urban Forestry: Plant and maintain trees on private property, streets, and open space areas.</p>	<p>Require new development to supply an adequate number of street trees and private trees.</p>	<p>Complies. The Project would incorporate landscaping, including shade trees, throughout the developed portion of the Project site.</p>

Table 13 (cont.): Project Compliance with Santa Rosa Climate Action Plan

Measure	Action Item	Project Compliance
		<p>The majority of the Project site would remain undeveloped woodland and open space. Approximately 1.51 acres would consist of landscaping and approximately 8.03 acres would consist of natural open space.</p>
<p>Energy-Efficient Appliances: Facilitate the efficient use of energy for appliances in residential, commercial, and industrial buildings.</p>	<p>Seek funding sources to develop a rebate program for residents and businesses to exchange inefficient appliances with Energy Star certified models.</p>	<p>Not directly applicable. The Project includes the construction and operations of an assisted living facility. However, implementation of the Project would not preclude future residents from exchanging any inefficient appliances with Energy Star verified models.</p>
<p>Appliance Electrification: encourage residents and businesses to switch natural-gas-powered appliances to electric power, where appropriate.</p>	<p>Utilize the energy-efficient appliance rebate program to facilitate the replacement of natural gas equipment with electric-powered equipment.</p>	<p>Not directly applicable. The Project includes the development of a new assisted living facility.</p>
	<p>Identify opportunities to implement additional programs that will switch appliances from natural gas to electricity.</p>	<p>Not directly applicable. The Project includes the development of a new assisted living facility.</p>
<p>Water Conservation: Continue to require and incentive water conservation.</p>	<p>Require new development to reduce potable water use in accordance with the Tier 1 standards of CALGreen.</p>	<p>Complies. The Project would implement required green building strategies to comply with Tier 1 CALGreen standards. The Project includes sustainability design features that support the Green Building Strategy. High performance, low-emissivity windows, optimum insulation levels and efficient heating, air conditioning, ventilation, and water heating systems would enhance energy savings and comfort. The Project would include low-water-use plumbing</p>

Table 13 (cont.): Project Compliance with Santa Rosa Climate Action Plan

Measure	Action Item	Project Compliance
		fixtures as well as high-performance low-flow toilets, faucets and showerheads using 20 percent less water than standard fixtures.
	Continue and expand water conservation efforts including water-efficient landscaping, rainwater harvesting, and high-efficiency appliance and fixture installations.	Complies. The Project would conform to the City’s Water Efficient Landscape Ordinance (WELO) and the California Green Building Standards Code. Existing trees on the Project site would be complemented with plantings of native oak and fir trees at the perimeter of the site, and Valley oaks and big leaf maples in the parking area. Drought tolerant and Mediterranean plant species would be used in landscaped areas of the site near the proposed building, and an irrigation system with weather-based controllers would be installed. Natural outcroppings of rock would be preserved in place at several locations on the site, and native boulders from the site would be used to enhance drainage areas.
	Replace water meters in Santa Rosa with meters that allow residents and businesses to track real-time water use through the City’s online web application.	Complies. The Project would include water meters in accordance with City standards.
	Encourage existing development and require new development to utilize smart water meters to facilitate water and cost savings.	Complies. The Project would include smart water meters accordance with City standards.
Lawn and Garden Activity: Encourage the use of electrified and higher-efficiency lawn and garden equipment.	Support the BAAQMD’s efforts to re-establish a voluntary exchange program for residential lawn mowers and backpack-style leaf blowers.	Not applicable.

Table 13 (cont.): Project Compliance with Santa Rosa Climate Action Plan

Measure	Action Item	Project Compliance
	Encourage new buildings to provide electrical outlets on the exterior in an accessible location to charge electric-powered lawn and garden equipment.	Complies. The Project would provide electrical outlets in areas accessible to be used for landscaping equipment.
	Encourage the replacement of existing high maintenance and high water use landscapes (such as removing turf through the Green Exchange rebate program) with low-water-use vegetation to reduce the need for gas-powered lawn and garden equipment.	Complies. The Project would conform to the City’s WELO and other outdoor water efficiency requirements.
Construction Emissions: Reduce emissions from heavy-duty construction equipment by limiting idling and utilizing cleaner fuels, equipment, and vehicles.	Minimize idling times either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes or less (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Provide clear signage at all access points to remind employees of idling restrictions.	Complies. As required by MM AIR-1, signage will be posted at the Project site throughout the duration of the construction period to remind employees of idling restrictions.
	Construction equipment shall be maintained in accordance with manufacturer’s specifications.	Complies. As required by MM AIR-1, all construction equipment shall be maintained in accordance with manufacture’s specifications.
	Work with Project applicants to limit GHG emissions from construction equipment by selecting one of the following measures, at a minimum, as appropriate to the construction Project: a. Substitute electrified equipment for diesel- and gasoline-powered equipment where practical. b. Use alternative fuels for construction equipment on-site, where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel. c. Avoid the use of on-site generators by connecting to grid electricity or utilizing solar-powered equipment.	Complies. As required by MM AIR-2, all off-road construction equipment in excess of 50 horsepower used on-site by the developer or contractors shall be equipped with engines meeting the USEPA Tier IV off-road engine emission standards.
Source of policy and project requirements: City of Santa Rosa 2012. ²²		

²² City of Santa Rosa. 2012. City of Santa Rosa Climate Action Plan. Website: <http://www.srcity.org/DocumentCenter/View/10762>. Accessed: June 3, 2017.

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

Environmental Evaluation

Hazardous materials are substances that, because of their chemical or physical properties, quantity, concentration, or other characteristics, may present a potential hazard to human health or

environment if improperly treated or disposed.²³ Similarly, hazardous waste refers to hazardous materials that are no longer in use and awaiting disposal. The City of Santa Rosa considers materials hazardous if it appears on lists of hazardous materials prepared by a federal, state, or local agency.²⁴ Hazardous materials and waste are classified by the United States Environmental Protection Agency and California Department of Toxic Substances Control according to four properties: toxicity, ignitability, corrosivity, and reactivity.

The Resource Conservation and Recovery Act of 1976 (RCRA) regulates the transportation and handling of hazardous waste. Multiple agencies across the local, state, and federal level administer regulations regarding the transport, permitting, storage, handling and disposal of hazardous waste. These agencies include Environmental Protection Agency (EPA), Department of Transportation (DOT), California Division of Occupational Safety and Health (OSHA), California Department of Toxic Substances Control (DTSC), State Water Resource Control Board (SWRCB), and the Sonoma County Hazardous Materials Division. Within the framework of the Medical Waste Management Act, the California Department of Health Services administers the Medical Waste Management Program to oversee the proper handling and disposal of medical waste through permitting and inspecting medical facilities. The program provides support to Sonoma County Environmental Health Department, which enforces the Medical Waste Management Act at the local level.²⁵

The Department of Transportation also regulates the transportation of hazardous through the National Hazardous Materials Route Registry (NHMRR). The listing reports all designated and restricted road and highway routes for transportation of highway route controlled quantities (HRCQ) of Class 7 (radioactive) materials (RAM) (HRCQ/RAM) and nonradioactive hazardous materials (NRHMs).²⁶ There are no NHMRR roadways near the Project site.

The State of California uses databases such as EnviroStor and GeoTracker to map the location of hazardous waste sites including sites that have been remediated, sites currently undergoing remediation, and sites that require cleanup.²⁷ A search of the databases found three hazardous materials sites located approximately 0.5 miles to the southeast of the Project site at 1412 Fountain Grove Parkway. The DTSC issued a formal closure certification for the three storage areas in 1995.

To address airport safety hazards, Sonoma County has prepared a Comprehensive Airport Land Use Plan that identifies the location of airports in the county, and established spheres of influence, where more stringent planning regulations and restrictions apply. The nearest airport to the Project site is Sonoma County Airport, roughly 7.3 miles to the northwest. The Project site does not fall within the sphere of influence of the Sonoma County Airport or any other airport.²⁸

²³ California Code of Regulations, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10

²⁴ Santa Rosa General Plan 2030 Draft Environmental Impact Report, page 4.N-1

²⁵ County of Sonoma, Medical Waste Program, Website: <http://www.sonoma-county.org/health/services/medicalwaste.asp>.

²⁶ Department of Transportation National Hazardous Materials Route Registry. Website: https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/042915%20National%20Hazardous%20Material%20Route%20Registry%20Notice_1.pdf. Accessed October 11, 2016.

²⁷ Santa Rosa Local Hazard Mitigation Plan, page 1

²⁸ Sonoma County Comprehensive Airport Land Use Plan

The City of Santa Rosa has prepared an Emergency Operations Plan that identifies the City's emergency planning, organization and response policies and procedures.²⁹ The City has also prepared a Local Hazard Mitigation Plan (LHMP) to address various types of hazards. The LHMP identifies the capabilities, resources, information, strategies for risk reduction, and critical facilities, and provides a set of strategies to reduce vulnerability to disaster through education and outreach programs, the development of partnerships, and implementation of actions to reduce the severity of impacts from a disaster. The draft LHMP is currently undergoing FEMA certification.³⁰

The California Department of Forestry and Fire Protection (CalFire) prepares maps of Very High Fire Hazard Severity Zones (VHFHS) that are used to develop recommendations for cities and planning. CalFire categorizes parcels into VHFHS and Non-VHFHS zones. The United States Forest Service also lists the Project site as a low wildfire hazard potential according to its Wildfire Hazard Potential map.³¹

Would the Project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than significant impact. Construction of the Project would involve the transport, use, and disposal of hazardous materials, such as diesel fuels, aerosols, and paints during the construction period. Additionally, once operational, pesticides and common household cleaning supplies would be utilized and stored on-site for landscaping and maintenance. Medical waste may also be generated on-site. However, hazardous substances would not be used, stored or transported in sufficient quantities to create a significant hazard to the public. Further, compliance with applicable plans and regulations, including the Sonoma County Hazardous Materials and Waste Management Plan and the California Medical Waste Program, would minimize associated risks to the maximum extent practicable. Therefore, impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than significant impact. The proposed Project site is currently undeveloped and would not require the demolition of any existing structures, therefore no hazards related to demolition would occur. As described above, small quantities of hazardous materials would be used on-site during construction and operation of the Project, however, not in sufficient quantities to create significant hazard in the unlikely event of upset or accident. Additionally, transport of hazardous materials would be restricted to designated regional and local routes, thereby minimizing the risks associated with upset and accident during transport. Overall, compliance with applicable regulations would ensure that associated impacts would be less than significant.

²⁹ City of Santa Rosa Emergency Operations Plan Draft 2011

³⁰ City of Santa Rosa, "Local Hazard Mitigation Plan: Hazard Mitigation Actions Table," Chapter 4, page 80

³¹ U.S. Forest Service (USFS) Wildfire Hazard Potential (WHP). Website: <http://www.arcgis.com/home/item.html?id=fc0ccb504be142b59eb16a7ef44669a3>. Accessed October 7, 2016.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than significant impact. There are no schools within 0.25 mile of the proposed Project site. The nearest school, Hidden Valley Elementary, is located at 3435 Bonita Vista Lane, roughly 1.5 miles south of the Project site. While small quantities of hazardous substances would be used on-site as described above, the Project would not involve the handling of these substances in proximity to a school and hazardous substances would be transported along designated routes that do not pass within 0.25 mile of a school. No roads near the Project site are listed under the National Hazardous Materials Route Registry. Therefore, impacts would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than significant impact. According to the DTSC and SWRCB databases, EnviroStor and GeoTracker respectively, the proposed Project site does not contain any Cortese list sites. As described above, three hazardous materials site located approximately 0.5 mile to the southeast of the Project site at 1412 Fountain Grove Parkway. However, the DTSC issued a formal closure certification for the three storage areas in 1995. The sites no longer pose a hazardous threat to the surrounding areas. As such, impacts would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No impact. As described above, the Project site is not located in an airport influence zone as delineated in the Sonoma County Comprehensive Airport Land Use Plan. The nearest airport, Sonoma County Airport, is roughly 7.3 miles northwest of the Project site. Given the distance of the Project site from local airports, intervening development and applicable air traffic and safety regulations, the Project would result in no impact with respect to air safety hazards.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No impact. The closest private airstrip is the Graywood Ranch Airport, located approximately 10.8 miles southeast of the Project site. Given the distance of the Project site from local airports, intervening development and applicable air traffic and safety regulations, the Project would result in no impact with respect to air safety hazards at or near a private air strip.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. The LHMP designates emergency evacuation routes, including US 101, SR 12 and Fountaingrove Parkway/Mission Boulevard.³² Located on a wooded hilltop at the eastern

³² City of Santa Rosa, Local Hazard Mitigation Plan, February 2016, page 15.

end of Gullane Drive, the Project would not interfere with evacuation along these routes or otherwise conflict with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less than significant impact. The site is located adjacent to Fountaingrove Lake, surrounded by residential and recreational development. As described above, the site is located in an area designated as a Non-Very High Fire Hazard Severity Zone (VHFHS) on CalFire Fire Hazard Maps. Further, the proposed facility would be equipped with fire sprinklers and would comply with the applicable fire safety provisions of the CBC, thereby reducing the risk of damage from fire to the maximum extent practicable. Impacts would be less than significant.

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

Environmental Evaluation

The nearest water body to the Project site is Fountaingrove Lake, a man-made dammed lake fed by Piner Creek. Several regulations at various jurisdictional levels protect water resources and quality. At the federal level, the Clean Water Act (CWA) is the primary federal law that governs and authorizes water quality control. Section 303 of CWA requires states to adopt water quality standards for all surface waters of the United States. The CWA establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate municipal and industrial discharge, including those from municipal storm sewer systems, which require Municipal Separate Storm Sewer System (MS4) permits.

At the state level, the Porter-Cologne Water Quality Control Act oversees California's water quality control. The act establishes the SWRCB and the nine regional offices, each having jurisdiction to regulate and protect waters in each region. More importantly, the SWRCB and RWQCB issue and enforce waste discharge permits, NPDES permits, CWA section 401 quality permits. Other state agencies with jurisdiction over water quality regulation in California include the California Department of Health Services (DHS), California Department of Pesticide Regulation, California Department of Fish and Game (CDFG) and the Office of Environmental Health and Hazard Assessment (OEHHA).³³

At the Regional level, the North Coast Regional Water Quality Control Board (NCRWQCB) serves Del Norte, Glenn, Humboldt, Lake, Marin, Mendocino, Modoc, Siskiyou, Sonoma, and Trinity Counties. The City of Santa Rosa's current NPDES stormwater permit (Order No. R1-2009-0050) regulates both stormwater and non-stormwater discharges from public and private projects into the Santa Rosa municipal storm drain system. The permit requires a minimum set of BMPs to be implemented at all construction sites, as well as permanent stormwater low impact development BMPs.³⁴

At the local level, the General Plan outlines strategies to reduce and manage stormwater runoff. The Storm Water Pollution Prevention Plan (SWPPP) includes a description of BMPs to prevent the discharge of silt and sediment from point and non-point sources into receiving waters. The SWPP aims to minimize the discharge of pollutants during construction, which includes activities are not limited to: clearing, grading, demolition, excavation, construction of new structures, and reconstruction of existing facilities involving removal and replacement that results in soil disturbance. The City's Standard Urban Stormwater Mitigation Plan (SUSMP) requires projects to design and implement post-development measures to reduce the potential stormwater impacts to local drainages.³⁵

The City of Santa Rosa is located within the Laguna de Santa Rosa Watershed, in the confluence of the Santa Rosa, Bennett, and Rincon Valleys. The City of Santa Rosa has three sources of water supply: entitlements from the Sonoma County Water Agency (SCWA), six groundwater wells, and recycled water. The SCWA receives its water supply from the Russian River while groundwater wells

³³ North Santa Rosa Station Area Specific Plan City of Santa Rosa Draft Environmental Impact Report, page 3.8-6.

³⁴ NCRWQCB. Order No. R1-2009-0050, Waste Discharge Requirements for the City of Santa Rosa.

³⁵ City of Santa Rosa General Plan Draft EIR, NPDES Program, page 4.H-6.

extract from the Santa Rosa Plain Sub-basin. The Santa Rosa Subregional Water Reuse System produces recycled water for the City's residents and business.³⁶

The SCWA entitlement provides up to 29,041 acre-feet per year (afy) of water while the groundwater wells provide up to 2,300 afy. Gross total water usage for 2015 was 5,389 million gallons. Ninety percent of the City's water supply is from the SCWA, while the remainder comes from groundwater and recycled water.³⁷ The water demand generated by the additional development of the General Plan 2035 beyond the development of the General Plan 2020 is anticipated to be 1,040 acre-feet/year. In the year 2035 with the proposed General Plan 2035, 38,486 acre-feet/year of water would be available, and demand would be 37,226 acre-feet/year (36,186 + 1,040). The Water Supply Assessment concluded that the City would have adequate water supply.³⁸

The Federal Emergency Management Agency (FEMA) issues Flood Insurance Rate Maps (FIRMs) that identifies land areas that are subject to flooding. FEMA's minimum level of flood protection for new development is the 100-year flood event, a flood that statistically has a one percent probability of occurring in any given year.³⁹ The City of Santa Rosa is located in Flood Zone 1A—Laguna de Santa Rosa-Mark West Creek Watershed.⁴⁰ Approximately 167.71 acres in Santa Rosa's Urban Growth Boundary are in the FEMA 100-year flood zone and 283.99 acres are in the 500-year flood zone.⁴¹

Dam inundation occurs when a flood control dam/water reservoir is damaged severely enough to compromise its ability to hold back water. These events pose a high risk the community but have low occurrence. This damage can occur as a result of earthquakes or other seismic activity, erosion of the dam face or foundation, or rapidly rising floodwaters that weaken the dam or overwhelm its capacity to drain excess water. When a dam fails, sudden fast moving floods migrate throughout the inundation zone. The speed and volume of these floodwaters can damage or destroy property, cause injury or loss of life, and displace large numbers of residents in the flood's path.⁴² Other hazards include seiches, oscillations of water in an enclosed body of water caused by strong winds and rapid changes in atmospheric pressure.⁴³ The General Plan also identifies that landslide hazards, including mudflows, increase with steep slopes located close to the Rodgers Creek Fault Zone.⁴⁴ As such, certain building codes and regulations must be met for developments within downtown or along the Rodgers Creek Fault Zone.

Would the Project:

a) Violate any water quality standards or waste discharge requirements?

Less than significant impact. Construction of the Project would require grading and construction of new structures. Extensive soil removal during the construction period may cause erosion and temporary impacts to water quality. Since the Project would disturb more than one acre of soil,

³⁶ City of Santa Rosa UWMP 2015, page 3.

³⁷ City of Santa Rosa UWMP 2015, page ES-1.

³⁸ City of Santa Rosa General Plan Draft EIR, page 4-G-12.

³⁹ FEMA Flood Zones, accessed August 23, 2016.

⁴⁰ City of Santa Rosa General Plan Draft EIR, Sonoma County Water Agency Flood Control Design Criteria, page 4.H-6.

⁴¹ City of Santa Rosa Local Hazards Mitigation Plan, page 34.

⁴² City of Santa Rosa Local Hazards Mitigation Plan, page 38.

⁴³ City of Santa Rosa General Plan Draft EIR, page 5-10.

⁴⁴ City of Santa Rosa General Plan 2035, page 12-3.

compliance with the Construction and Development Effluent Guidelines within the NPDES permit would be required.

Developments that create or replace a combined total of 1 acre or more of impervious surface are also subject to follow the City's SUSMP. The SUSMP requires implementation of Low Impact Development (LID) BMPs that aim to decentralize stormwater treatment and to integrate it into the overall site design. The LID Technical Design Manual encourages the use of LID techniques to both retain and treat runoff water from impervious surfaces. Compliance with these guidelines would prevent the discharge of pollutants to stormwater during construction.

During Project operation, changes to the amount of stormwater infiltration that occurs on the site would have the potential to affect long-term water quality by increasing the amount of pollutants that are discharged from the site. However, implementation of permanent stormwater quality features as required under the SUSMP, and implementation of post-construction BMPs as required under the NPDES permit would ensure that no stormwater discharge requirements are violated. Furthermore, the Project would be required to prepare and comply with a SWPPP, as outlined within City Municipal Code Section 17-12.170. Therefore, the Project would not violate any wastewater standards and impacts would be less than significant.

- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?)**

Less than significant impact. As described above, 90 percent of the City's water supply is from the SCWA entitlements, which takes water from the Russian River. The Project is consistent with the General Plan and the relatively small number of senior residents would not increase overall water demand in Santa Rosa over projected use analyzed in the EIR. Further, daily per capita water use in 2015 was 85 gallons per capita per day (gcpd). An estimated 71 seniors and 50 staff at the facility would use 10,370 gallons per day, 3,785,050 gallons per year, or 11.62 afy. Therefore SWCA has adequate supply (29,041 afy) to provide for the facility.

The proposed Project would include the construction of 75 covered and surface parking spaces, which would decrease the amount of pervious surfaces on the site. However, pursuant to the SUSMP, the Project would be required to include stormwater best management practices that limit the volume and flow rate of stormwater on-site by providing opportunities for groundwater infiltration. As such, the proposed Project would not significantly increase water demand from groundwater supply or interfere with groundwater recharge. Therefore, impacts would be less than significant.

- c) Substantially alter the existing drainage pattern of 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?**

Less than significant impact. No streams or rivers are located on or immediately adjacent to the Project site. Piner Creek, a stream that originates as an outlet from Fountaingrove Lake, is located

approximately 0.4 mile to the south of the Project site. The proposed Project would substantially alter the landscape, and may affect the existing natural drainage pattern on the Project site. Grading and construction may temporarily alter stormwater flow patterns; however, compliance with NPDES permit conditions and the applicable provisions of the Municipal Code would lessen impacts. Municipal Code Title 18 and 19, which address general building construction and grading and soil requirements, respectively, would ensure that impacts are reduced to the maximum practicable extent. Therefore, impacts would be less than significant.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less than significant impact. Although there are no streams or rivers located on the Project site, given the extent of grading and excavation proposed, the Project would substantially alter the landscape, and may affect the existing natural drainage pattern on the Project site. However, as described above, the Project would be required to implement stormwater best management practices that limit the volume and flow rate of stormwater on-site to no more than existing conditions. Further, compliance with Municipal Code Title 18 and 19, which address general building construction and grading and soil requirements, respectively, would ensure that impacts are reduced to the maximum practicable extent. Therefore, impacts would be less than significant.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than significant impact. As discussed above, the proposed Project would include the construction of a clean and dirty stormwater runoff collection system. In 2010, Santa Rosa was issued a joint Municipal Separate Storm Sewer (MS4) NPDES permit with the County of Sonoma and SCWA by the North Coast Regional Water Quality Control Board (North Coast RWQCB). The City must comply with the provisions of the permit by ensuring that new development and redevelopment mitigate water quality impacts to stormwater runoff both during and after construction. Compliance with the permit conditions would reduce impacts to less than significant.

f) Otherwise substantially degrade water quality?

Less than significant impact. As described in Section 1.4, the proposed Project would include the development of an assisted living facility, surrounded by the Fountaingrove Golf Course. Construction of the facility would include excavation of soils and development of new structures and pervious surfaces. When the facility is operational, maintenance would involve small quantities of hazardous household materials such as cleaning solvent, but not in quantities sufficient to exceed treatment requirements. The Project would adhere to the SUSMP and SWPPP described above. Adhering to these guidelines and regulations, impacts associated with water quality would be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No impact. FEMA's National Flood Hazard Maps shows that the project site is located in an area of minimal flood hazards. FEMA has identified several 100-year and 500-year flood zones in Santa Rosa along creeks that are prone to flood in heavy rains. The flood zones surround portions of Spring Creek, Matanzas Creek, Colgan Creek, Naval Creek, Roseland Creek, and Kawana Springs Creek. The Project site is not located within a 100-year flood hazard zone, as shown in the FEMA Flood map. Furthermore, the City of Santa Rosa does not identify the site as a flood zone danger, as outlined in the Local Hazard Mitigation Plan. No impacts would occur.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No impact. The Project site is not located within a 100-year flood hazard zone as shown in the FEMA Flood map. Furthermore, the site is not located within the flood zones outlined in the Local Hazard Mitigation Plan. No impacts would occur.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less than significant impact. As described above, dam inundation and flooding pose a low threat to the Proposed Project. Although the Project site falls within a dam inundation area, impacts would be less than significant due to the site elevation and topography. The Project site located in hilly terrain and would not expose people or structures to significant risk. Therefore, impacts would be less than significant.

j) Inundation by seiche, tsunami, or mudflow?

Less than significant impact. The Project site is located near Fountaingrove Lake, an inland body of water capable of producing seiches. However, the site is located in a hillside terrain that would reduce the risk of flooding from a seiche. The Project site is approximately 20 miles from the coastline and, therefore, is not susceptible to tsunamis. The Project site is approximately 300 feet east of the Rodgers Creek Fault Zone, and would therefore adhere to the guidelines set forth in the General Plan that new structures built within downtown or along the Rodgers Creek Fault Zone would incorporate designs to withstand mudflows.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
10. Land Use and Planning <i>Would the Project:</i>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Evaluation

The Santa Rosa General Plan envisions a community featuring a diverse range of housing and employment opportunities. The Plan includes policies to focus development within the Urban Growth Boundary in a way that maintains the local quality of life through compatibility with adjacent land uses, provision of parks and open spaces, and connection between neighborhoods and activity centers. The Plan also includes policies that encourage the provision of senior housing funded by private and non-profit entities.⁴⁵ The General Plan Land Use Map designates areas of the City for different uses. The Zoning Code establishes development standards for each land use, including regulations regarding building heights, lot coverage and front, side and rear setbacks. The City’s Municipal Code also includes provisions for the removal of trees and the protection of trees during construction activities; stormwater pollution prevention; and erosion control.

The Project site is composed of two parcels (APNs 173-670-016 and 173-670-004) totaling 12.17 acres. The general plan land use designation applicable to the site is Low Density Residential, which allows for residential density of between 2 and 8 units per gross acre. Attached single-family and multi-family units are permitted. Both parcels are zoned Planned Development (PD).

The CDFW identifies habitat conservation areas throughout the state, each having an HCP. There are no HCPs identified near the Project site. The City of Santa Rosa adopted the Santa Rosa Plain Conservation Strategy in 2005, a framework that identifies short- and long-term actions to protect listed plant and animal species.⁴⁶

⁴⁵ City of Santa Rosa General Plan 2035. Land Use and Livability Element. Page 4-50.

⁴⁶ Department of Fish & Wildlife, “California Regional Conservation Plans Map” August 2015

Would the Project:

a) Physically divide an established community?

No impact. The physical division of an established community typically refers to the construction of a linear feature, such as an interstate highway or railroad tracks, or removal of a means of access, such as a local bridge that would impact mobility within an existing community of between a community and outlying area. The Project does not involve any such features and would not remove any means of access in the surrounding area. The Project site is surrounded by existing development including residential dwelling units and a golf course. As such, the Project would not physically divide an established community and there would be no associated impact.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less than significant impact. A significant impact would occur if the Project would conflict with the City's General Plan or Municipal Code, including the Zoning Ordinance, or tree removal controls. As stated above, the General Plan land use designation applicable to the Project site is Low Density Residential, which allows for single- and multi-family residential development at a density of 2.0 to 8.0 units per gross acre. This designation would allow up to 96 units on the 12.17-acre site, while only 49 units are proposed. Therefore, the Project is within the middle range of the permitted density of this land use designation.

Further, the Project would be consistent with many of the policy objectives of the General Plan, including the provision of senior housing and the encouragement of green building standards. As described in section 1.4 above, the proposed facility would comply with California's Title 24 energy code, with the inclusion of features such as high-performance low-emissivity windows, efficient heating, ventilation, air conditioning and water heating systems, and low-water-use plumbing fixtures, as well as high-performance, low-flow toilets, faucets and showerheads that would use 20 percent less water than standard fixtures.

The Project site is zoned Planned Development (PD), and compliance with the applicable Policy Statement and Development Plan, including basic development considerations regarding treatment of the land, architectural controls, and density, is required. Additionally, development standards are determined by a conditional use permit to ensure that no conflicts with the zoning code occur. The applicable Policy Statement is the Fountaingrove Planned Community Policy Statement, adopted in 1981 and amended in 1992. The proposed Project is consistent with the objectives outlined in the Policy Statement, including in the way it would retain the general topographic and tree mass characteristics and major natural features of the site, as well as in the way it would contribute to the provision for a range of housing types in the Fountaingrove area.

As described above in Section 2.4.e, construction of the Project would involve the removal of 304 existing trees; however, compliance with City of Santa Rosa's tree ordinance contained at Municipal Code Chapter 17-24, and implementation of MM BIO-3 would reduce associated impacts to a less

than significant level. Therefore, overall, the Project would not conflict with applicable land use plans, policies or regulations and impacts would be less than significant.

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?

No impact. The Project site is not located within any identified Habitat Conservation Areas or the study area for the Santa Rosa Plain Conservation Strategy plan. Therefore, the Project would have no associated impacts.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
11. Mineral Resources <i>Would the Project:</i>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Evaluation

Environmental Setting

The Surface Mining and Reclamation Act of 1975 (SMARA) is the primary state law concerning mineral resources, including sand, gravel, and building stone which are important for commercial purposes. Because of the economic importance of mineral resources, SMARA limits new development in areas with significant mineral deposits. SMARA also requires State Geologists to classify specified areas into Mineral Resource Zones (MRZs). An updated report on Mineral Land Classification by The California Geological Survey indicates that the Project site is located in an MRZ-1 area, where adequate information indicates that no significant mineral resource are present, surrounded by MRZ-3A areas containing known mineral occurrences of undetermined mineral resource significance.⁴⁷

There are no mineral resource recovery sites on or in the vicinity of the Project site,⁴⁸ which is located in hilly terrain in the northern part of Santa Rosa, surrounded by residential and recreational development. The nearest mine is the Mark West Quarry, located approximately 5.6 miles to the northeast of the site.

Would the Project:

- a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

No impact. As described above, the site is located in a MRZ-1 zone, where adequate information indicates that no significant mineral resources are present. While areas in the vicinity of the site are classified as MRZ-3 (where known mineral occurrences of undetermined mineral resource significance are present), the site is surrounded by residential and recreational development.

⁴⁷ Mineral Land Classification of Sonoma County Map, March 2005.

⁴⁸ City of Santa Rosa General Plan 2035 Land Use Diagram

Therefore, development of the Project would not result in the loss of availability of known mineral resources and there would be no associated impacts.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No impact. The Project site is located in hilly terrain in the northern part of the City of Santa Rosa and, as described above, there are no mineral resource recovery sites on the site or in the vicinity. As such, the Project would have no impact with respect to loss of availability of mineral resource recovery sites.

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

Environmental Evaluation

This section describes the existing noise setting and potential effects from Project implementation on the site and its surrounding area. This analysis is based on the Noise Impact Analysis report dated June 8, 2017, which is included in this Initial Study as Appendix F.

Noise is defined as unwanted sound, measured and expressed in decibels (dB). Most of the sounds that we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. Noise is typically generated by transportation, specific land uses, and ongoing human activity.

The standard unit of measurement of the loudness of sound is the decibel (dB). The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dBA or less are only perceptible in laboratory environments. A change of 3 dBA is the lowest

change that can be perceptible to the human ear in outdoor environments. While a change of 5 dBA is considered to be the minimum readily perceptible change to the human ear in outdoor environments.

Since the human ear is not equally sensitive to sound at all frequencies, the A-weighted decibel scale (dBA) was derived to relate noise to the sensitivity of humans. It gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for a number of various sound level metrics, including the day/night sound level (L_{dn}) and the Community Noise Equivalent Level (CNEL), both of which represent how humans are more sensitive to sound at night.⁴⁹ In addition, the equivalent continuous sound level (L_{eq}) is the average sound energy of time-varying noise over a sample period and the L_{max} is the maximum instantaneous noise level occurring over a sample period.

Existing Noise Sources

The Project site is located in the City of Santa Rosa, California. Most of the land uses surrounding the Project site are residential land uses. Single-family homes are located beyond the golf course to the northwest and northeast of the Project boundaries. The Fountaingrove Lodge is located southwest of the Project site.

The existing noise levels on the Project site were documented through a long-term ambient noise measurement taken on the Project site.

One long-term noise measurement was taken on Thursday, August 18, 2016 beginning at 4:00 p.m. and ending on Friday, August 19, 2016 at 3:00 p.m. The noise measurements data sheet is provided in Appendix F of this document. The noise measurements were taken near the western boundary of the Project site near the proposed site entrance along Gullane Drive. The noise monitoring location was selected in order to document existing long-term ambient noise levels on the Project site and to determine compatibility of the proposed facility with the City's land use compatibility standards.

The average hourly ambient noise levels were measured to be 47.8 dBA L_{eq} , with a maximum reading of 76.7 dBA L_{max} and minimum reading of 31.6 dBA L_{min} . The 24-hour weighted day-night average noise level for the Project site is 49.5 dBA L_{dn} .

The long-term noise measurement captured noise from all noise sources in the Project vicinity, including parking lot activities at the nearby hotel land use and traffic on local roadways.

Existing stationary noise sources in the Project vicinity include truck deliveries, loading/unloading activities, and typical parking lot activities associated with the nearby hotel land use. Typical medium truck (step-van type with roll-doors) loading and unloading activities in the Project vicinity result in maximum noise levels from 70 dBA to 80 dBA L_{max} at 50 feet. Representative parking activities, such as people conversing or doors slamming, generate approximately 60 dBA to 70 dBA

⁴⁹ L_{dn} is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m. CNEL is the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m. Source: Harris, Cyril M. 1998. Handbook of Acoustical Measurement and Noise Control.

L_{max} at 50 feet. These activities are potential point sources of noise that contribute to the existing ambient noise environment in the Project vicinity.

Regulatory Framework

The City of Santa Rosa has established Noise Compatibility Standards for residential and non-residential land uses in the Noise and Safety Element of the Santa Rosa General Plan 2035 (Santa Rosa 2009).

For the proposed Project, the closest comparable land use designation of the City's land use compatibility guidelines is nursing home land use. The following are the General Plan noise policies applicable to the land use designation of nursing homes:

- Noise environments of up to 70 dBA L_{dn} are considered “normally acceptable” based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements.
- Noise environments of 60 dBA to 70 dBA L_{dn} are “conditionally unacceptable” where new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- Noise environments of 70 dBA to 80 dBA L_{dn} are “normally unacceptable” where new construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
- Noise environments of 80 dBA L_{dn} and higher are “clearly unacceptable” where new construction or development should generally not be undertaken.

Applicable goals and policies of the General Plan are summarized as follows:

- Encourage residential developers to provide buffers other than sound walls, where practical. Allow sound walls only when projected noise levels at a site exceed land use compatibility standards
- Prevent new stationary and transportation noise sources from creating a nuisance in existing developed areas. Use a comprehensive program of noise prevention through planning and mitigation, and consider noise impacts as a crucial factor in project approval. The Land Use Compatibility Standards specify normally acceptable levels for community noise in various land use areas.
- Require new projects in the following categories to submit an acoustical study, prepared by a qualified acoustical consultant:
 - All new projects proposed for areas with existing noise above 60 dBA L_{dn} . Mitigation shall be sufficient to reduce noise levels below 45 dBA L_{dn} in habitable rooms and 60 dBA L_{dn} in private and shared recreational facilities. Additions to existing housing units are exempt.

- All new projects that could generate noise whose impacts on other existing uses would be greater than those normally acceptable (as specified in the Land Use Compatibility Standards).
- Pursue measures to reduce noise impacts primarily through site planning. Engineering solutions for noise mitigation, such as sound walls, are the least desirable alternative.
- Do not permit existing uses to generate new noises exceeding normally acceptable levels unless:
 - Those noises are mitigated to acceptable levels; or
 - The activities are specifically exempted by the City Council on the basis of community health, safety, and welfare.
- Adopt mitigations, including reduced speed limits, improved paving texture, and traffic controls, to reduce noise to normally acceptable levels in areas where noise standards may be exceeded (e.g., where homes front regional/arterial streets and in areas of mixed use development.)
- Encourage developers to incorporate acoustical site planning into their projects. Recommended measures include:
 - Incorporating buffers and/or landscaped earth berms;
 - Orienting windows and outdoor living areas away from unacceptable noise exposure;
 - Using reduced-noise pavement (rubberized-asphalt);
 - Incorporating traffic calming measures, alternative intersection designs, and lower speed limits; and
 - Incorporating state-of-the-art structural sound attenuation and setbacks.
 - Discourage new projects that have potential to create ambient noise levels more than 5 dBA L_{dn} above existing background, within 250 feet of sensitive receptors.

The City of Santa Rosa also addresses noise in the ordinances of the City Code. Santa Rosa Municipal Code Section 17-16.120, Machinery and Equipment, states that “it is unlawful for any person to operate any machinery, equipment, pump, fan, air-conditioning apparatus or similar mechanical device in any manner so as to create any noise, which would cause the noise level at the property line of any property to exceed the ambient base noise level by more than five decibels.”

Standard city conditions of project approval limit the hours of construction to 7:00 a.m. to 7:00 p.m., Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturdays. No construction is permitted on Sundays and holidays.

Would the Project result in:

- a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Less than significant impact with mitigation incorporated. Noise levels in the vicinity of the Project site would be influenced by the ongoing operation of the proposed Project.

Two types of short-term noise impacts could occur during the construction of the proposed Project. First, construction crew commutes and the transport of construction equipment and materials to the Project site would incrementally increase noise levels on access roads leading to the Project site. Although there would be a relatively high single-event noise exposure potential causing intermittent noise nuisance, the effect on longer-term (hourly or daily) ambient noise levels would be small. Therefore, short-term construction-related impacts associated with worker commute and equipment transport to the Project site would be less than significant.

The second type of short-term noise impact is related to noise generated during construction on the Project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Table 14 lists typical construction equipment noise levels, based on a distance of 50 feet between the equipment and a noise receptor. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings. Impact equipment such as pile drivers are not expected to be used during construction of this Project.

Table 14: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Pickup Truck	No	55
Pumps	No	77
Air Compressors	No	80
Backhoe	No	80
Front-End Loaders	No	80
Portable Generators	No	82
Dump Truck	No	84
Tractors	No	84
Auger Drill Rig	No	85
Concrete Mixer Truck	No	85
Cranes	No	85
Dozers	No	85
Excavators	No	85
Graders	No	85
Jackhammers	Yes	85
Man Lift	No	85
Paver	No	85

Table 14 (cont.): Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Pneumatic Tools	No	85
Rollers	No	85
Scrapers	No	85
Concrete/Industrial Saws	No	90
Impact Pile Driver	Yes	95
Vibratory Pile Driver	No	95
Source: FHWA, 2006.		

The highest noise levels would be generated during ground clearing, excavation, and foundation construction, as these phases require the use of the heaviest, and loudest, pieces of construction equipment. Large pieces of earthmoving equipment, such as graders, excavators, and bulldozers, generate maximum noise levels of 80 dBA to 85 dBA L_{max} at a distance of 50 feet. These noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and receptor. As construction moves away from noise-sensitive receptors, noise levels generated by heavy construction will be lower. A characteristic of noise is that each doubling of the sound sources with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, the worst-case combined noise level during this phase of construction would be 90 dBA L_{max} at a distance of 50 feet from an active construction area.

The closest sensitive noise receptor to the east of the Project site are residential land uses. The closest building façades of these residential homes would be located approximately 355 feet from the construction footprint where the heaviest construction equipment would be operating. At this distance, these residential land uses may be exposed to noise levels ranging up to approximately 73 dBA L_{max} when construction activities occur at the portion of the Project site nearest these homes.

The closest sensitive-noise receptor to the west of the Project site is also residential land uses. The closest building façades of these residential homes would be located approximately 365 feet from the construction footprint. At this distance, these residential land uses may be exposed to noise levels ranging up to approximately 73 dBA L_{max} when operation of heavy construction equipment occurs at the portion of the Project site nearest these homes.

Another noise-sensitive receptor in the Project vicinity includes the hotel land use to the southwest of the Project site. The closest building façades of this lodge would be located approximately 550 feet from the construction footprint where the heaviest construction equipment would operate. At this distance, the lodge's nearest building façades may be exposed to noise levels ranging up to 69 dBA L_{max} when construction activities occur at the portion of the Project site nearest this lodge.

Although there would be single-event noise exposure potential causing intermittent noise nuisance from Project construction activity, the effect on longer-term (hourly or daily) ambient noise levels would be small. Standard city conditions of Project approval limit the hours of construction to 7:00 a.m. to 7:00 p.m., Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturdays; and no construction is permitted on Sundays and holidays. Therefore, restricting construction activities to these allowable time periods, as well as implementing the best management noise reduction techniques and practices outlined in MM NOI-1, would ensure that potential short-term construction noise impacts on sensitive receptors in the Project vicinity would be reduced to less than significant.

Stationary Source Operation Noise Impacts

A significant impact would occur for the proposed nursing homes type land use development if the Project would result in noise levels that would create ambient noise levels more than 5 dBA L_{dn} above existing background noise levels in the Project vicinity. According to the City of Santa Rosa City Code, it is also unlawful for any person to operate any machinery, equipment, pump, fan, air-conditioning apparatus or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient base noise level by more than 5 decibels.

The proposed Project would include new stationary noise sources, such as typical parking lot activities. Typical parking lot activities such as people conversing, doors slamming, or vehicles idling generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet. These activities are expected to occur sporadically throughout the day, as visitors and staff arrive and leave the parking lot areas. The proposed project's tentative site plan shows 63 potential surface parking spaces and 12 enclosed garage parking spaces. Existing background ambient noise levels are documented by the long-term ambient noise measurement to average 47.8 dBA L_{eq} and maximum noise levels of up to 76.7 dBA L_{max} at the western Project limits near the residential homes adjacent to Gullane Drive. Although there would be occasional high, single-event noise exposure ranging up to 52 dBA L_{max} as measured at the nearest receptor from parking lot activities, such activities would not result in an increase above existing ambient noise levels. Parking lot activities would occur intermittently and for only a short duration of time. These single-event maximum noise level activities would only occur for a cumulative of a minute or two within any hour, and would therefore not result in a perceptible increase in the hourly average noise levels in the Project vicinity. Therefore, Project-related parking lot activities would not result in an increase in ambient noise levels by more than 5 dBA L_{dn} above existing background as measured at nearby sensitive receptors; and the impact would be less than significant.

Implementation of the Project would also include occasional delivery truck loading/unloading activities. Typical medium truck (step-van type with roll-doors) loading and unloading activities result in maximum noise levels from 70 dBA to 80 dBA L_{max} at 50 feet. These activities are expected to occur at most a couple of times throughout a typical day as supplies are delivered or packages are picked up at the proposed facility. The closest noise-sensitive receptor building façades are the single family residences located approximately 645 feet northeast from the potential delivery areas. Because of distance attenuation, maximum noise levels from these activities would range from 48 dBA to 58 dBA L_{max} at this nearest residential property. These resulting noise levels from new

stationary source activities are below the existing measured maximum noise level of 76.7 dBA L_{max} recorded in the Project vicinity. These single-event maximum noise levels are not expected to occur for more than a cumulative 1 minute within any hour and when averaged over a 24-hour period would not result in an exceedance of the existing average ambient noise levels in the Project vicinity. Therefore, Project-related delivery activities would not result in an increase in ambient noise levels by more than 5 dBA L_{dn} above existing background noise levels experienced in the Project vicinity, and would result in a less than significant impact on nearby sensitive receptors.

At the time of preparation of this analysis, details were not available pertaining to proposed rooftop mechanical ventilation systems for the Project. Therefore, a reference noise level for typical rooftop mechanical ventilation systems was used. Noise levels from typical rooftop mechanical ventilation equipment are anticipated to range up to approximately 60 dBA L_{eq} at a distance of 25 feet. Rooftop mechanical ventilation systems could be located as close as 420 feet northeast from the nearest off-site sensitive receptor. In addition, the roof parapet would block the line of sight from all rooftop equipment to off-site receptors, providing a minimum of 6 dBA in shielding reduction. Therefore, noise generated by rooftop mechanical ventilation equipment would attenuate to less than approximately 29 dBA L_{eq} at the nearest off-site residential receptor. According to City Code Section 17-16.120, it is unlawful for any person to operate any machinery, equipment, pump, fan, air-conditioning apparatus or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient base noise level by more than five decibels. The long-term ambient noise levels in the Project vicinity are documented through the long-term ambient noise measurement to be 47.8 dBA L_{eq} . Therefore, rooftop mechanical ventilation equipment operational noise levels, as measured at the nearest off-site sensitive receptor, would not exceed existing ambient noise levels more than 5 dBA L_{dn} .

Therefore, all Project-related stationary operational noise sources would result in a less than significant impact.

Mobile Source Operation Noise Impacts

A significant impact would occur for the proposed nursing homes type land use development if the Project would be exposed to transportation noise levels in excess of the City's "normally acceptable" land use compatibility standard of 70 dBA L_{dn} or if it would be exposed to noise levels that would exceed the interior noise standards of 45 dBA L_{dn} . The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate existing and future traffic noise conditions in the vicinity of the Project site. Traffic data used in the model was obtained from the traffic report for the Project prepared by W-Trans (Appendix G). The resultant noise levels were weighed and summed over a 24-hour period in order to determine the L_{dn} values. The traffic noise modeling input and output files are included in Appendix F of this document. Table 15 shows a summary of the traffic noise levels for existing background traffic noise levels without and with the Project as measured at 50 feet from the centerline of the outermost travel lane.

Table 15: Existing Traffic Noise Model Results Summary

Roadway Segment	Existing No Project ADT	Existing No Project (dBA) L _{dn}	Existing Plus Project ADT	Existing Plus Project (dBA) L _{dn}	Increase over Existing No Project (dBA)
Thomas Lake Harris Drive—Fountaingrove Parkway to Gullane Drive	960	50.01	1,100	50.7	0.6
Thomas Lake Harris Drive—Gullane Drive to Kilarney Circle	910	49.9	930	50.0	0.1

Notes:

ADT is calculated by the FHWA model based on PM peak hour traffic volumes from the traffic study prepared for the Project. FHWA model ADT assumptions are lower than ADT derived from the ITE methodology used in the traffic report; however, even if all 250 average daily trips forecast using ITE methodology traveled along any of the modeled roadway segments, they would still not result in even a 1 dBA increase in traffic noise levels that would exist without the Project. L_{dn} (dBA) is stated as measured at 50 feet from the centerline of the outermost travel lane.
Source: FirstCarbon Solutions, 2016.

Table 16 shows a summary of the traffic noise levels for baseline background traffic noise levels without and with the Project as measured at 50 feet from the centerline of the outermost travel lane.

Table 16: Baseline Traffic Noise Model Results Summary

Roadway Segment	Baseline No Project ADT	Baseline No Project (dBA) L _{dn}	Baseline Plus Project ADT	Baseline Plus Project (dBA) L _{dn}	Increase over Baseline No Project (dBA)
Thomas Lake Harris Drive—Fountaingrove Parkway to Gullane Drive	2,000	53.3	2,200	53.7	0.4
Thomas Lake Harris Drive—Gullane Drive to Kilarney Circle	2,000	53.3	2,000	53.3	0.0

Source: FirstCarbon Solutions, 2016.

Table 17 shows a summary of the traffic noise levels for future background traffic noise levels without and with the Project as measured at 50 feet from the centerline of the outermost travel lane.

Table 17: Future Traffic Noise Model Results Summary

Roadway Segment	Future No Project ADT	Future No Project (dBA) L _{dn}	Future Plus Project ADT	Future Plus Project (dBA) L _{dn}	Increase over Future No Project (dBA)
Thomas Lake Harris Drive—Fountaingrove Parkway to Gullane Drive	3,600	55.9	3,800	56.1	0.2

Table 17 (cont.): Future Traffic Noise Model Results Summary

Roadway Segment	Future No Project ADT	Future No Project (dBA) L _{dn}	Future Plus Project ADT	Future Plus Project (dBA) L _{dn}	Increase over Future No Project (dBA)
Thomas Lake Harris Drive—Gullane Drive to Kilarney Circle	3,600	55.9	3,600	55.9	0.0
Source: FirstCarbon Solutions, 2016.					

Based on the modeled traffic noise results, the highest noise levels would occur under future plus Project traffic conditions. The modeling results in Table 17 show that traffic noise levels along the modeled roadway segment of Thomas Lake Harris Drive adjacent to the Project site, north of Fountainway Parkway to Gullane Drive, would range up to 56.1 dBA L_{dn} under future plus Project traffic conditions as measured at 50 feet from the centerline of the outermost travel lane. The nearest façade of the proposed nursing home facility would be located approximately 845 feet from the centerline of the outermost travel lane of this roadway segment. At this distance, traffic noise levels along this roadway segment would attenuate by approximately 23.6 dBA to approximately 32.5 dBA L_{dn}. These traffic noise levels are well below the City’s normally acceptable land use compatibility threshold of 70 dBA L_{dn} for new nursing home land use development. Therefore, traffic noise impacts on proposed exterior areas of the Project site would be less than significant.

Traffic noise levels would also not exceed the City’s established interior noise level standards. As stated above, traffic noise levels with implementation of the Project could range up to approximately 32.5 dBA L_{dn} at the nearest façade of the proposed facility. Therefore, traffic noise impacts on interior living spaces for the proposed nursing home land uses would be well below the City’s interior noise performance standard of 45 dBA L_{dn}.

Therefore, traffic noise impacts to the proposed Project would not exceed the City’s land use compatibility or the applicable interior noise standards for the proposed nursing home land uses. Traffic noise impacts to the proposed Project would be considered less than significant and no mitigation would be required.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact. Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings.

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. When assessing annoyance from groundborne vibration, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second. To distinguish vibration levels from noise levels, the unit is written as “VdB.”

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include construction activities such as blasting, pile driving and operating heavy earthmoving equipment. However, construction vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). For purposes of this analysis, Project-related impacts are expressed in terms of PPV. Typical vibration source levels from construction equipment are shown in Table 18.

Table 18: Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58
Bulldozer—small	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82
Backhoe	0.051	82
Crane (Mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer—Large	0.089	87
Caisson drilling	0.089	87
Vibratory Roller (small)	0.101	88
Compactor	0.138	90
Clam shovel drop	0.202	94
Vibratory Roller (large)	0.210	94
Pile Driver (impact-typical)	0.644	104
Pile Driver (impact-upper range)	1.518	112
Source: Compilation of scientific and academic literature, generated by FTA and FHWA.		

Propagation of vibration through soil can be calculated using the vibration reference equation:

$$PPV = PPV_{ref} * (25/D)^n \text{ (in/sec)}$$

Where:

PPV = reference measurement at 25 feet from vibration source

D = distance from equipment to property line

n = vibration attenuation rate through ground

According to Chapter 12 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment manual (2006), an “n” value of 1.5 is recommended to calculate vibration propagation through typical soil conditions.

Operational Vibration Impacts

Implementation of the Project would not include any permanent sources that would expose persons in the Project vicinity to groundborne vibration levels that could be perceptible without instruments at any existing sensitive land use in the Project vicinity. In addition, there are no existing significant permanent sources of groundborne vibration in the Project vicinity to which the proposed Project would be exposed. Therefore, Project operational groundborne vibration-level impacts would be considered less than significant.

Short-term Construction Vibration Impacts

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings.

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include construction activities such as blasting, pile driving, and operating heavy earthmoving equipment.

Of the variety of equipment that would be used during construction, large vibratory rollers would produce the greatest groundborne vibration levels. Impact equipment such as pile drivers is not expected to be used during construction of this Project. Large vibratory rollers produce groundborne vibration levels ranging up to 0.210 inch per second (in/sec) peak particle velocity (PPV) at 25 feet from the operating equipment. The nearest off-site receptor to the proposed construction footprint is the residential land use northeast of the Project on Lakepointe Circle. This receptor is located approximately 355 feet from the nearest construction area where heavy construction equipment would potentially operate. At this distance, groundborne vibration levels could range up to 0.004 PPV from operation of a large vibratory roller. This is well below the industry standard vibration damage criteria of 0.2 PPV for residential non-engineered timber and masonry buildings. Therefore, construction-related groundborne vibration impacts would be considered less than significant.

- c) **A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

Less than significant impact. Audible increases in noise levels generally refer to a change of 3 dBA or more, as this level has been found to be barely perceptible to the human ear in outdoor

environments. A change of 5 dBA is considered to be the minimum change considered readily perceptible to the human ear in outdoor environments. According to the City of Santa Rosa Code, it is also unlawful for any person to operate any machinery, equipment, pump, fan, air-conditioning apparatus or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient base noise level by more than five decibels. Therefore, for purposes of this analysis, an increase of 5 dBA or greater would be considered a substantial permanent increase in ambient noise levels.

This highest traffic noise level increase with implementation of the Project would occur along Thomas Lake Harris Drive south of Gullane Drive under existing plus Project conditions. The Project would result in an increase of 0.6 dBA. This increase is below the level that is considered to be a perceptible change (a 3 dBA increase), and is well below a 5 dBA increase that would be considered a substantial permanent increase in noise levels compared with noise levels that would exist without the Project. Therefore, Project-related traffic noise impacts on off-site receptors would be less than significant.

As is shown in the discussion in Impact 12a), above, new stationary noise sources resulting from implementation of the Project would not result in noise levels above existing background noise levels as measured at off-site sensitive receptors. Therefore, Project-related stationary sources would not result in a substantial permanent increase compared with noise levels existing without the Project, and noise impacts on off-site receptors would be less than significant.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than significant impact with mitigation incorporated. Implementation of the Project would result in short-term increases in ambient noise levels due to construction activities. Construction noise impacts were analyzed in the discussion in impact 12a), above. Project-related construction activities could result in high intermittent noise levels of up to approximately 73 dBA L_{max} at the closest noise-sensitive land uses. Although there would be a relatively high single-event noise exposure potential causing intermittent noise nuisance, the effect on hourly or daily ambient noise levels would be small. Compliance with the standard city project conditions of approval restricting the permissible hours of noise producing construction activities and implementation of MM NOI-1 requiring standard construction noise reduction measures (including required use of approved mufflers on equipment) would reduce short-term construction impacts on sensitive receptors in the Project vicinity to a less than significant level.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less than significant impact. The nearest airport to the Project site is Sonoma County Airport, located approximately 7.3 miles northwest of the Project site. Because of the distance from and orientation of the airport runways, the Project site is located well outside of the 55 dBA CNEL airport noise contours. While aircraft noise is occasionally audible on the Project site from aircraft flyovers, aircraft noise associated with nearby airport activity would not expose people residing or working in

the Project area to excessive noise levels. Therefore, impacts associated with public airport noise would be less than significant.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No impact. The Project site is not located within the vicinity of a private airstrip. Therefore, no impacts associated with private airstrip noise would occur.

Mitigation Measures

MM NOI-1 Implementation of the following multi-part mitigation measure is required to reduce potential construction period noise impacts:

- The construction contractor shall ensure that all equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment.
- The construction contractor shall ensure that unnecessary idling of internal combustion engines (i.e., idling in excess of 5 minutes) is prohibited.
- The construction contractor shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists.
- At all times during Project grading and construction, the construction contractor shall ensure that stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from adjacent residences.
- The construction contractor shall ensure that the construction staging areas shall be located to create the greatest feasible distance between the staging area and noise-sensitive receptors nearest the Project site.
- All on-site demolition and construction activities, including deliveries and engine warm-up, shall be restricted to the hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 8:00 a.m. and 6:00 p.m. on Saturday. No such activities shall be permitted on Sundays or holidays.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
13. Population and Housing				
<i>Would the Project:</i>				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Evaluation

Environmental Setting

The City of Santa Rosa experienced significant growth from 2000 to 2010, adding 2,022 residents per year, a 14 percent increase. By comparison, the City of Petaluma, the Town of Windsor, and Sonoma County grew 6, 18, and 6 percent, respectively, between 2000 and 2010.⁵⁰ Over the next two decades, Santa Rosa envisions adding 25,225 new housing units to the existing 71,070 units, 30,400 new jobs to the existing 97,980 jobs, and 69,815 new residents to the existing 167,815 residents.⁵¹

The General Plan includes a range of policies designed to accommodate this future growth, including policies to promote compact growth, foster the development of urban villages, and ensure the provision of housing options that respond to the needs of all economic and demographic segments of the community including seniors, families, the homeless and individuals with special needs. The General Plan also seeks to create housing opportunities and accessible living environments that allow seniors to age in place, either in the same home, assisted living facilities, continuing care facilities, or other housing types within the same community.

Various policies and planning practices help the City accommodate the future growth projections. The City of Santa Rosa made significant efforts to support housing needs for low-income residents by subsidizing over 131 affordable developments. General Plan Policies H-C-8 and H-C-12 commit the City to continue supporting and funding developments of units within reach to extremely low-income households.⁵²

⁵⁰ City of Santa Rosa General Plan 2035, Population and Housing Element, page 4-2-4-6

⁵¹ City of Santa Rosa General Plan 2035, Population and Housing Element table 2-3, Table 2-3

⁵² City of Santa Rosa General Plan 2035, Housing Section, page 4-10

In addition, the City will encourage single-room occupancy housing and other special housing arrangements and fund and support emergency shelter and homeless support services through Policies H-D-5, H-D-8, HD-9, and H-D10. Altogether, multiple policies help the City of Santa Rosa meet the Regional Housing Needs Allocation (RHNA) requirements established for the seven year period (2015-2023) by ABAG.⁵³

Would the Project:

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

Less than significant impact. Once operational, the facility would house up to 71 residents, would be drawn largely from the local area. The facility is not expected to serve substantial numbers of residents from outside the Santa Rosa area. Residents, staff, and visitors would most likely reside in neighboring cities and communities. The construction phase of the Project would draw construction workers to the site; however, the construction phase is temporary and would not induce long-term population growth nor influence the relocation of construction workers. The facility would attract full time medical staffers and would account for less than 1 percent of the anticipated housing growth. Therefore, impacts are less than significant.

- b) **Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

No impact. The Project site itself is currently undeveloped. There are no existing structures on the site and no paved or unpaved driveways. Therefore, the proposed Project would not displace any existing housing and there would be no associated impact.

- c) **Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

No impact. As described above, the Project site is undeveloped and does not contain any existing housing. The proposed Project would build a new medical care facility, housing up to 71 residents. The proposed Project is consistent with the General Plan, providing housing needs for senior citizens. Therefore, there would be no impacts.

⁵³ City of Santa Rosa General Plan 2035 "Population and Housing Element" Chapter 4 Housing, page 4-10

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
14. Public Services				
<i>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:</i>				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

Public services provided by the City include fire protection, police protection, education, recreation and parks, and libraries. Santa Rosa Fire Department (SRFD) provides fire protection services in the City of Santa Rosa. The SRFD responds to all fires, hazardous materials incidents, and medical emergencies (including injury accidents) in the City. The senior command structure consists of a Fire Chief, an Emergency Preparedness Coordinator, a Deputy Fire Chief, an Administrative Services Officer, and a Division Chief Fire Marshal. The SRFD consists of three Bureaus—Operations, Administration, and Prevention—and two divisions—Training and Safety Division and Support Services Division. Ten fire engines and two truck companies respond to emergencies.⁵⁴ The SRFD has 138 sworn employees and 10 civilians. The Santa Rosa General Plan 2035 establishes a response time goal for first resource arrival within five minutes of dispatch 90 percent of the time. A secondary goal, pertaining to larger incidents, is to provide a full assignment within 8 minutes 90 percent of the time. The Santa Rosa General Plan 2035 EIR projected buildout over 25 years and determined the need to move the fire station on Parker Hill road to a new location near Fountaingrove Parkway to serve the future residents of the area. Fire Station 5, constructed in 2015, is located at 2201 Newgate Court, approximately 1.7 miles east of the Project site and is now the closest fire station to the site.

Santa Rosa Police Department (SRPD) provides police protection services throughout the City.⁵⁵ The SRPD consists of three divisions (Field Services, Special Services, and Technical Services), consisting of seven Bureaus: Patrol, Investigations, Communications, Records, Technology, Traffic, and Support; and Administrative Services. The SRPD employed approximately 256 people in 2016.⁵⁶

⁵⁴ "Fire Department," City of Santa Rosa, accessed August 5, 2016, <http://srcity.org/departments/fire/Pages/default.aspx>.

⁵⁵ "Police Department," City of Santa Rosa, accessed October 7, 2016, <http://www.srcity.org/departments/police/Pages/default.aspx>.

⁵⁶ "Police Department," City of Santa Rosa, accessed October 7, 2016, <http://www.srcity.org/departments/police/Pages/default.aspx>.

The Project site is located in Santa Rosa City School District (SRCSD), one of 10 districts serving the City of Santa Rosa. Within the SRCSD district, there are ten elementary schools, five middle schools, five high schools, and four charter and alternative schools.⁵⁷ The nearest elementary school is Hidden Valley Satellite located at 3555 Parker Hill Road, approximately 2.0 miles southeast of the Project site. The nearest middle school is Rincon Valley Middle School located at 4650 Badger road, approximately 5.0 miles southeast of the Project site. The nearest high school is Maria Carrillo High School located at 6975 Montecito Blvd, approximately 5.3 miles southeast of the Project site.

The City of Santa Rosa Recreation and Parks Department manages and maintains a total of 950 acres of parks, trails, and open space, including 12 community parks, 53 neighborhood parks and facilities, and five special recreation parks. Parks vary in size and amenities.⁵⁸ The closest park to the Project site is Nagasawa Community Park located at 1313 Fountaingrove Parkway, approximately 1.2 miles southeast of the Project site. Nagasawa Community Park is 33.7 acres in size, with amenities that include picnic tables, trails, fishing, boating (for non-motorized boats), and restrooms. Another nearby park is the 1-acre Fir Ridge Park, located approximately 1 mile northeast of the Project site. Fir Ridge Park amenities include picnic tables, a playground, a basketball court and an open grass area.

The Quimby Act, codified in 1975 under California Government Code Section 66477, authorizes California cities and counties to pass ordinances requiring developers set aside land, donate conservation easements, or pay fees for park acquisition to help ensure the adequate provision of parkland and preserve open space through a series of policy provisions. For planning purposes, the City sets a minimum overall citywide ratio of 3.5 acres of city parks per 1,000 residents, plus 1.4 acres of publicly accessible school recreational land, and 1.1 acres of public serving open space.⁵⁹ With 950 acres of parkland, the City currently exceeds its established ratio and is projected to continue to exceed it with buildout of the Santa Rosa General Plan 2035.

The Sonoma County Library System operates five libraries in Santa Rosa, including the Central Library and four branch libraries. The Northwest Santa Rosa Library is the closest library to the Project site, and is located at 150 Coddington Center, approximately 3.1 miles south of the Project site. Its amenities include computer loan (with internet), wireless internet, a research station with access to the library database, a copy machine, and a public printer.

a) Fire protection?

Less than significant impact. The Project would result in a significant environmental impact if new or physically altered fire protection facilities would need to be built to maintain acceptable service ratios, response times, or other performance objects for fire protection. As described above, the City relocated Fire Station 5 to Fountaingrove Parkway in 2015 to serve existing residents and future growth anticipated with the buildout of the Santa Rosa General Plan 2035. The proposed Project is consistent with land use and zoning. No additional fire personnel or equipment would be necessary to serve the proposed Project. Therefore, impacts would be less than significant.

⁵⁷ "Schools," Santa Rosa City Schools, accessed August 5, 2106, <http://www.srscs.k12.ca.us/Schools/Pages/default.aspx>.

⁵⁸ "Recreation & Parks," City of Santa Rosa, accessed October 7, 2016, Website: <http://www.srscity.org/departments/recreationandparks/Pages/default.aspx>.

⁵⁹ City of Santa Rosa General Plan Draft EIR, "City Parks and Recreation," Chapter P Parks and Recreation, Page 4.P-1.

b) Police protection?

Less than significant impact. The Project would result in a significant environmental impact if new or physically altered police protection facilities would need to be built to maintain acceptable service ratios, response times, or other performance objectives for police protection. There would be an incremental increase in the calls for service due to the proposed development. However, the Project site is in a developed area that is already being served by police. The Santa Rosa 2035 General Plan EIR did not find a significant impact due to anticipated developments in relation to police protection. This Project is consistent with land use and zoning and does not propose the type of uses that typically involve increased calls for service (i.e., commercial retail). No additional police personnel or equipment would be necessary to serve the proposed Project. Therefore, impacts would be less than significant.

c) Schools?

Less than significant impact. The Project would result in a significant environmental impact if new or physical altered public education facilities would need to be built to maintain acceptable performance objects for public education. The Project is a proposed assisted living facility and the projected age for incoming residents is approximately 80 years old, and these residents would not be attending schools in the District. However, it is possible that staff of the facility would have school-aged children that would attend schools in the District. It is reasonably foreseeable that most of these staff members would be from the Santa Rosa area. The small increase in the student population, if any, would not cause significant impacts to occur.

d) Parks?

Less than significant impact. The Project would result in a significant environmental impact if new or physically altered parks would need to be built to maintain acceptable service ratios. The City is already exceeding its goal of 3.5 acres of parkland (defined by the City as neighborhood and community parks) per 1,000 residents, as the current parkland ratio is 5.4 acres per 1,000 residents.⁶⁰ With a projected population of 220,110 in 2035, the City would still be exceeding its goal with a parkland ratio of 4.3 acres per 1,000 residents.⁶¹ The Project would have approximately 71 residents at full occupancy, many of whom would be drawn from the Santa Rosa area. As such, the Project would not result in a substantial population increase in the City and would not significantly affect the ratio of parkland to residents. Therefore, impacts would be less than significant.

e) Other public facilities?

Less than significant impact. The Project would result in a significant environmental impact if new or physically altered library facilities would need to be built to maintain acceptable service ratios. The Sonoma County General Plan 2020 sets a building standard of 0.55 to 0.68 square foot per

⁶⁰ City of Santa Rosa. "City Parks." Website: <http://www.ci.santa-rosa.ca.us/departments/recreationandparks/parks/cityparks/Pages/default.aspx>. Accessed September 1, 2016.

⁶¹ Santa Rosa General Plan 2035 Draft Environmental Impact Report, 4.B-2.

capita. The projected system wide average for 2025 is 0.33 square foot.⁶² Therefore, the County is currently not meeting its building size standards. However, as mentioned in impact 14(e), it is reasonably foreseeable that many of the future residents would be drawn from the Santa Rosa area. In addition, the Project would provide a private library for use of the future residents. Therefore, the impacts to existing public libraries would be less than significant.

⁶² Sonoma County General Plan 2020 Draft Environmental Impact Report, 4-9.75.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
15. Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

The City of Santa Rosa provides and manages developed parkland, open space, and recreational facilities for the use of its residents. The City’s Recreation and Parks Department is responsible for the development, operation, and maintenance of all City recreational facilities. The City-run parks and park amenities are described in the previous section.

Other public services the City provides for residents include two year-round swim facilities, six sports leagues, nine sports courts and fields, one golf course, two community centers, two center senior centers, youth centers, and over 100 recreation classes. The nearest senior center is located at 2060 West College Avenue, approximately 4.5 miles south of the Project site. The nearest community center is located at 415 Steele Lane, approximately 2.5 miles south of the Project site.

Sonoma County Regional Parks Department provides and manages regional parks to serve its residence. There are roughly 4,206 acres of County maintained regional parkland in Sonoma County.⁶³ There are 11 regional parks within the City of Santa Rosa. The closest regional park to the Project site is Tom Schopflin Fields located at 4351 Old Redwood Highway, approximately 4.2 miles east of the Project site.⁶⁴ With the exception of Schopflin Fields, Shiloh Ranch Regional, and Annadel State Park, these parks and facilities are within the UGB.

- a) **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Less than significant impact. Significant impact would occur if existing facilities would suffer substantial physical deterioration due to increased use related to population increase. Future residents would be expected to largely come from the Santa Rosa area; thus, the Project would not

⁶³ Sonoma County General Plan 2020 Draft Environmental Impact Report, 4.9-53.

⁶⁴ Sonoma County Regional Parks. “Parks A-Z.” Website: http://parks.sonomacounty.ca.gov/Get_Outdoors/Parks_A-Z.aspx. Accessed October 10, 2016.

result in a substantial population increase. As mentioned in the Project Description, the development would provide residents with recreational facilities on-site, including a swimming/aerobics pool, walking paths, and bocce ball court. The deterioration of existing neighborhood and regional parks or other recreational facilities would not be substantial. Therefore, the impact would be less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less than significant impact. Significant impacts would occur if new recreation facilities needed to be constructed because of an increase in population. Future residents would be expected to largely come from the Santa Rosa area; thus, the Project would not result in a substantial population increase. Furthermore, the development would provide residents with recreational facilities on-site. Therefore, there would be no substantial impact such that new or expanded facilities would be required, and the impact would be less than significant.

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

Environmental Evaluation

The General Plan lays out a set of balanced, long-range, multi-modal transportation goals and policies intended to provide for a safe, efficient transportation system that minimizes environmental, financial, and neighborhood impacts. Roadway typologies in the City’s transportation network include freeway, expressway, residential street, local connector street, city connector street, main street, and on-street primary bicycle. Level of service (LOS) is a standard measure of traffic service along a roadway or at an intersection. It ranges from A to F, where LOS A is best and LOS F is worst. The City of Santa Rosa has a LOS standard of D or better, where feasible and appropriate.⁶⁵

⁶⁵ City of Santa Rosa General Plan DEIR, Transportation and Circulation.

US 101 is the major north-south route in Sonoma County, providing regional linkages to the Bay Area, the coast, and northern California. Fountaingrove Parkway serves as an important thoroughfare in the vicinity of the Project site. Access to the site is provided via Thomas Lake Harris Drive and Gullane Drive, a private driveway that runs east from Thomas Lake Harris Drive.⁶⁶

The Sonoma County Transportation Authority (SCTA) is the countywide planning and programming agency for transportation related issues, essentially serving as a Congestion Management Authority (CMA). The SCTA implements a Comprehensive Transportation Plan (CTP), which identifies key roadway segments and intersections throughout the County. CTP segments and intersections are located on major transportation routes, including freeways, county expressways, urban arterials, and rural highways. There are no CTP segments or intersections in the vicinity of the Project site.

Regional access is via Fountaingrove Parkway and US 101. Santa Rosa CityBus Route 1 stops at Fountaingrove Parkway/Thomas Lake Harris Drive, 0.7 miles from the Project site. There is an existing Class I bike trail along Fountaingrove Parkway.

There are six public-use airports in Sonoma County: two are privately owned, three are owned by cities (Cloverdale, Healdsburg, and Petaluma airports), and one, the Charles M. Schulz Sonoma County Airport (STS), is owned by the County of Sonoma. The nearest airport to the Project site is Sonoma County Airport, roughly 7.3 miles to the northwest. The Project site does not fall within any study area or the Sonoma County Airport Sphere of Influence.⁶⁷

Potential traffic impacts of the Project were analyzed in the Traffic Impact Study (TIS) conducted by W-Trans on May 19, 2017 (Appendix G).

Would the Project:

- a) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

Less than significant impact. The City of Santa Rosa General Plan 2035 Policy T-D-1 establishes LOS D as the minimum overall roadway performance level during peak travel periods along all major corridors. The City's standard does not specify criteria for intersections; however, since intersections typically exist where corridor capacity constraints occur; acceptable intersection operation typically translates to acceptable corridor operation. The W-Trans traffic impact study analyzed two intersections in the vicinity of the Project site: Thomas Lake Harris Drive/Gullane Drive and Fountaingrove Parkway/Thomas Lake Harris Drive (West). The study intersections currently operate acceptably at LOS A during the AM and PM peak hours, as shown in Table 19.

⁶⁶ City of Santa Rosa General Plan 2035, Transportation Element, 5-2 Roadway Classification System

⁶⁷ Sonoma County Transit Authority, Comprehensive Transportation Plan Draft. Website: http://scta.ca.gov/wp-content/uploads/2016/09/CTP16_090616.pdf. Accessed October 6, 2016.

Table 19: Existing Intersection Levels of Service

Study Intersection Approach	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Thomas Lake Harris Dr/Gullane Dr	0.5	A	0.2	A
<i>Westbound (Gullane Dr) Approach</i>	9.1	A	9.0	A
2. Fountaingrove Pkwy/Thomas Lake Harris Dr (West)	5.9	A	5.3	A
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; results for minor approaches to two-way stop-controlled intersections are indicated in <i>italics</i> .				

Baseline operating conditions were assessed to reflect the addition of traffic associated with known projects that may be constructed and/or become operational in the study area in the next two to three years. The following relevant projects used in the Baseline scenario were selected based on the expected impact to the study area from the City’s “Permit Santa Rosa” portal, and confirmed with City Staff in April 2017:

- Canyon Oaks—96 apartment units on Thomas Lake Harris Drive, north of Emerald Isle site
- Chanate Cottages—18 apartment units at 2387 Chanate Road (constructed)
- Fir Ridge Workforce Housing—36 attached residential dwellings at 3700 Fir Ridge Drive
- Fountaingrove Inn Condos—22 attached residential dwellings at 3586 Mendocino Avenue
- Terrazzo at Fountaingrove—19 single-family detached residential dwellings at 1601 Fountaingrove Parkway
- Skyfarm 3—30 single-family detached residential dwellings at 3925 Saint Andrews Drive
- The Arbors—37 single-family detached residential dwellings at 3500 Lake Park Drive
- Hampton Inn—100-room hotel at 3383 Airway Drive

Trip distribution assumptions for the approved projects were based on the project trip distribution, as well as published traffic studies for specific projects, if available. The anticipated traffic associated with these projects was added to the volumes analyzed in the “Existing Conditions” scenario in order to determine Baseline volumes. Under these conditions, the study intersections are expected to continue operating acceptably at LOS A during the AM and PM peak hours. The resulting operating conditions are summarized in Table 20.

Table 20: Baseline Intersection Levels of Service

Study Intersection Approach	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Thomas Lake Harris Dr/Gullane Dr	0.3	A	0.1	A
<i>Westbound (Gullane Dr) Approach</i>	9.6	A	9.7	A

Table 20 (cont.): Baseline Intersection Levels of Service

Study Intersection Approach	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
2. Fountaingrove Pkwy/Thomas Lake Harris Dr (West)	8.0	A	7.1	A
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; results for minor approaches to two-way stop-controlled intersections are indicated in <i>italics</i> .				

Future Traffic Conditions

Future traffic volumes representing year 2040 buildout of the City of Santa Rosa General Plan were obtained from the Sonoma County Transportation Authority’s SCTM/10 travel demand model. The model includes link-based volume projections for Fountaingrove Parkway and Thomas Lake Harris Drive. The “Furness” procedure was used to determine future turning movements at the Fountaingrove Parkway/Thomas Lake Harris Drive (West) intersection, while future volumes at the Thomas Lake Harris Drive/Gullane Drive intersection were developed by adding the model’s incremental growth on Thomas Lake Harris Drive to the intersection’s existing volumes.

Under future conditions, the study intersections are projected to continue operating acceptably at LOS A or B during the AM and PM peak hours. Future conditions are summarized in Table 21.

Table 21: Future Intersection Levels of Service

Study Intersection Approach	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Thomas Lake Harris Dr/Gullane Dr	0.2	A	0.1	A
<i>Westbound (Gullane Dr) Approach</i>	<i>10.8</i>	<i>B</i>	<i>11.0</i>	<i>B</i>
2. Fountaingrove Pkwy/Thomas Lake Harris Dr (West)	13.4	B	12.5	B
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; results for minor approaches to two-way stop-controlled intersections are indicated in <i>italics</i> .				

Trip Generation

Land uses such as the proposed Project typically generate very low levels of traffic. The anticipated trip generation for the proposed Project, shown in Table 22, was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 9th Edition, 2012, for a “Nursing Home” (Land Use #620). Trip generation for this land use is based on the number of beds.

The proposed assisted living facility is expected to generate an average of 189 new trips on a daily basis, including 10 trips during the AM peak hour and 16 trips during the PM peak hour.

Table 22: Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Nursing Home (#620)	71 beds	2.66	189	0.14	10	6	4	0.22	16	7	9

Existing plus Project Intersection Levels of Service

Completion and occupation of the proposed Project would result in a less than significant increase in delay, with all of the study intersections continuing to operate at LOS A during the AM and PM peak hours. A summary of the level of service calculations is contained in Table 23.

Table 23: Existing and Existing plus Project Peak Hour Intersection Levels of Service

Study Intersection Approach	Existing Conditions				Existing plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Thomas Lake Harris Dr/Gullane Dr	0.5	A	0.2	A	0.8	A	1.0	A
<i>Westbound (Gullane Dr) Approach</i>	9.1	A	9.0	A	9.2	A	9.1	A
2. Fountaingrove Pkwy/Thomas Lake Harris Dr (West)	5.9	A	5.3	A	6.1	A	5.6	A

Notes:
Delay is measured in average seconds per vehicle; LOS = Level of Service; results for minor approaches to two-way stop-controlled intersections are indicated in *italics*.

Baseline plus Project Intersection Levels of Service

Under Baseline plus Project conditions, the study intersections would also experience a less than significant increase in delay, with continued LOS A operation during the AM and PM peak hours. A summary of the level of service calculations is contained in Table 24.

Table 24: Baseline and Baseline plus Project Peak Hour Intersection Levels of Service

Study Intersection Approach	Baseline Conditions				Baseline plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Thomas Lake Harris Dr/Gullane Dr	0.3	A	0.1	A	0.5	A	0.5	A
<i>Westbound (Gullane Dr) Approach</i>	9.6	A	9.7	A	9.8	A	9.7	A
2. Fountaingrove Pkwy/Thomas Lake Harris Dr (West)	8.0	A	7.1	A	8.2	A	7.4	A

Notes:
Delay is measured in average seconds per vehicle; LOS = Level of Service; results for minor approaches to two-way stop-controlled intersections are indicated in *italics*.

Future plus Project Intersection Levels of Service

Upon the addition of Project-generated traffic to future volumes, the study intersections would continue to operate acceptably at LOS B or better during both AM and PM peak hours, with less than significant increases in delay. A summary of the future level of service calculations is contained in Table 25.

Table 25: Future and Future plus Project Peak Hour Intersection Levels of Service

Study Intersection Approach	Future Conditions				Future plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Thomas Lake Harris Dr/Gullane Dr	0.2	A	0.1	A	0.3	A	0.3	A
<i>Westbound (Gullane Dr) Approach</i>	<i>10.8</i>	<i>B</i>	<i>11.0</i>	<i>B</i>	<i>11.0</i>	<i>B</i>	<i>11.0</i>	<i>B</i>
2. Fountaingrove Pkwy/Thomas Lake Harris Dr (West)	13.4	B	12.5	B	13.6	B	13.2	B

Notes:
Delay is measured in average seconds per vehicle; LOS = Level of Service; results for minor approaches to two-way stop-controlled intersections are indicated in *italics*.

As shown above, the study intersections are expected to operate acceptably upon the addition of Project trips to Existing, Baseline, and Future scenarios, resulting in a less than significant impact on traffic operation.

While residents and patients of the proposed project may not generate pedestrian, bicycle, or transit trips, employees and visitors may use one or more of these modes on an occasional or routine basis. The Project includes construction of a new sidewalk along the Gullane Drive extension to the project site, connecting to existing sidewalks on Gullane Drive and Thomas Lake Harris Drive. Bicyclists can access the regional bicycle network via Gullane Drive and Thomas Lake Harris Drive, which connects to the existing Class I bike trail along Fountaingrove Parkway. Therefore, the proposed project will effectively tie into the surrounding multimodal circulation network, making walking and bicycling viable means of travel for the facility’s employees and visitors. With implementation of CityBus’s updated bus network system in May 2017, the nearest bus stop to the Project site is approximately 0.7 mile away on Fountaingrove Parkway. Given the distance and hilly terrain in the area, it is unlikely that Project employees or visitors will use transit to access the project site. However, should bus service be re-established on Fountaingrove Parkway including the stop at Thomas Lake Harris Drive, transit will become a viable option for employees and visitors. Continuous pedestrian facilities exist between the Project site and this transit stop. Given the nature of the proposed facility, it is anticipated that most transit trips made by residents would be via existing paratransit services offered by CityBus.

Overall, the Project would not have significant adverse impacts on the performance of the transportation system for any travel mode, and impacts with respect to conflicts with measures of transportation system effectiveness would be less than significant.

- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

Less than significant impact. Although there are no CTP segments or intersections in the vicinity of the Project site, workers commuting to the site during the construction and operational phases could potentially travel along CTP segments including US 101 or the Fountaingrove Parkway. However, given the small number of trips the Project is projected to generate in comparison to the large volumes of traffic those segments and intersections receive, the Project would not have a substantial adverse impact on the performance of the CTP network. Impacts would be less than significant.

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

No impact. The Project would involve construction and operation of a 49-unit assisted living facility in an established residential neighborhood within the City of Santa Rosa. As described above, the Project site is not located in an airport influence zone. As such, the Project would not affect air traffic patterns and there would be no associated impact.

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

Less than significant impact with mitigation incorporated. Sight distance along Thomas Lake Harris Drive at Gullane Drive was evaluated based on sight distance criteria contained in the Highway Design Manual published by Caltrans. The recommended sight distances for minor street approaches that are either a private roadway or a driveway are based on stopping sight distance. The W-trans traffic study found that sight distance from Gullane Drive to the north and south at the Thomas Lake Harris intersection is adequate for observed average speeds. However, some drivers on Thomas Lake Harris Drive exceed the posted 25 miles per hour posted speed limit, at speeds requiring a greater sight distance than is available at the Gullane Drive intersection.⁶⁸

In order to reduce speeds on Thomas Lake Harris Drive and ensure provision of adequate sight distance at Gullane Drive, W-Trans recommends implementation of MM TRANS-1, which would require restriping of Thomas Lake Harris Drive to include a two-way left turn lane. Adoption of MM TRANS-1 would reduce impacts related to sight distance to less than significant. Additionally, construction of the driveway leading from Gullane Drive to the proposed facility would be done in compliance with the City of Santa Rosa's Street Design and Construction Standards, further reducing the potential for roadway hazards. Overall, impacts would be less than significant with mitigation incorporated.

- e) Result in inadequate emergency access?**

Less than significant impact. Emergency access would be provided from Gullane Drive to the main driveway interior to the site. The main driveway would be designed to provide emergency vehicle access and turnaround clearance as required by City standards, including the provisions of the City's

⁶⁸ W Trans Focused Traffic Study for Emerald Isle, Project Findings, page 8.

Street Design Standards and the Municipal Code. Compliance with City standards and regulations would ensure the Project would not result in inadequate emergency access and impacts would be less than significant.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less than significant impact. There are no transit stops or bicycle facilities in the immediate vicinity of the site; however, there is a bus stop 0.7 mile from the Project site at Fountaingrove Parkway/Thomas Lake Harris Drive, and a Class I bike trail along Fountaingrove Parkway. Existing sidewalks along Thomas Lake Harris Drive provide pedestrian access to transit for staff or visitors to the proposed facility, and bicycle access to the site is available via Thomas Lake Harris Drive. The Project would not include any features that could decrease the performance or safety of bicycle, pedestrian, or transit facilities, and, therefore, impacts would be less than significant.

Mitigation Measures

MM TRANS-1 In order to ensure adequate site line distance based on sight distance criteria contained in the Caltrans Highway Design Manual, the Project Applicant shall be responsible for restriping Thomas Lake Harris Drive in the vicinity of Gullane Drive to include a two-way left-turn lane, the design of which shall be specified and approved by the City of Santa Rosa Public Works Department.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<p>17. Tribal Cultural Resources <i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074, as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</i></p>				
<p>a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>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.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

Human history in California is divided into three broad periods: the Early period, the Middle period, and the Late period. Economic patterns, stylistic aspects, and regional phases further subdivide cultural patterns into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.⁶⁹

The Paleoindian period (11,500 to 8000 B.C.) was characterized by big-game hunters occupying broad geographic areas—evidence for this period has not yet been discovered in the San Francisco Bay or Sonoma County vicinity. During the Early period, consisting of the *Early Holocene* (8000 to 3500 B.C.) and *Early Period* (3500 B.C. to 500 B.C.), geographic mobility continued and is characterized by the millingslab and handstone as well as large wide-stemmed and leaf-shaped projectile points. The first cut shell beads and the mortar and pestle are first documented in burials during this period, indicating the beginning of a shift to sedentism. During the Middle period, which includes the *Lower Middle Period* (500 B.C. to A.D. 430), and *Upper Middle Period* (A.D. 430 to 1050), geographic mobility may have continued, although groups began to establish longer-term base camps in localities from which a more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, obsidian and chert concave-base points, and the occurrence of sites in a wider range of environments suggest that the economic base was more diverse. By the Upper Middle Period, mobility was being replaced by the

⁶⁹ City of Santa Rosa General Plan Draft EIR, page 4.J-2.

development of numerous small villages. Around A.D. 430, a “dramatic cultural disruption” occurred evidenced by the sudden collapse of the *Olivella* saucer bead trade network. During the Initial Late period (A.D. 1050 to 1550), social complexity developed toward lifeways of large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small cornnotched points, and a diversity of beads and ornaments.

By the mid-1800s Spanish missionization, diseases, raids by Mexican slave traders, and dense immigrant settlement had disrupted Southern Pomo culture, dramatically reducing the population, and displacing the native people from their villages and land-based resources. In 1920 the Bureau of Indian Affairs purchased a 15.45-acre tract of land in Graton for the Marshall, Bodega, Tomales, and Sebastopol Indians. This land was put into a federal trust, and the neighboring peoples who included both Coast Miwok and Southern Pomo were consolidated into one recognized group called the Graton Rancheria. The Lytton Band of Pomo Indians was first established in 1937 when Bert Steele, who was part Achomawi and part Nomlaki, and his Bodega Pomo wife, petitioned the government for a 50-acre parcel north of Healdsburg. In 1958 the U.S. government enacted the Rancheria Act of 1958, transferring tribal property into private ownership. Forty-four Rancherias in California were affected, including the Graton and Lytton Rancherias.⁷⁰

Would the Project

- a) **Cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?**

Less than significant impact. Historic resources can include wood, stone, foundations, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, and other refuse. As described above in section 5, a records search conducted at the NWIC found no historic resources on the site. Further, in order to assess the potential for tribal cultural resources, on August 16, 2016, FCS sent a request to the Native American Heritage Commission (NAHC) to review its sacred lands file search and to provide a list of Native American Representatives who may be interested in providing additional information on potential Tribal Cultural Resources (TCRs) within the Project area.

On August 23, 2016, a response was received from the NAHC indicating that no sacred sites were listed as present on the Project site. Further, of the three Native American representatives contracted pursuant to the recommendation of the NAHC, representatives of the Lytton Rancheria of California indicated that they have no specific evidence of tribal cultural resources on the site. Nevertheless, the Lytton Rancheria representative indicated that they believe there is potential for finding tribal cultural resources on the site as the land falls within traditional Pomo territory. As such, implementation of MM CUL-1—described above and which stipulates specific measure to be taken to reduce or avoid impacts to tribal cultural resources that may be discovered during Project construction—is recommended. This mitigation measure would prevent substantial adverse changes in the significance of tribal cultural resources to the maximum extent practicable. With implementation of MM CUL-1 impacts would be less than significant.

⁷⁰ City of Santa Rosa General Plan Draft EIR, page 4.J-2.

- b) Cause a substantial adverse change in the significance of a tribal cultural 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?**

Less than significant impact. As described above, a sacred lands file search returned no records of known tribal cultural resources on the Project site and Native American tribes consulted on the recommendation of the NAHC did not have specific information regarding tribal cultural resources on the site. However, given that the Project site falls within traditional Pomo territory it cannot be concluded with certainty that there are no tribal cultural resources on the site. Implementation of MM CUL-1, described above, stipulates specific measure to be taken to reduce or avoid impacts to tribal cultural resources that may be discovered during Project construction. This mitigation measure would prevent substantial adverse changes in the significance of tribal cultural resources to the maximum extent practicable. With implementation of MM CUL-1 impacts would be less than significant.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
18. Utilities and Service Systems <i>Would the Project:</i>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Evaluation

A majority of the City’s water supply is derived from the Russian River watershed and is delivered under contractual agreement by the Sonoma County Water Agency (SCWA). The SCWA holds water rights to divert 92 million gallons of water per day (mgd) with an annual maximum of 75,000 acre-feet per year from the Russian River. SCWA also has three groundwater wells in the Santa Rosa Plain, which provide an average additional supply of 3,870 acre-feet per year.⁷¹ The City of Santa Rosa demanded 16,679 acre-feet in 2015 and expected the demand to rise to 28,840 acre-feet by 2040.⁷²

Stormwater generated in Santa Rosa drains through six drainage basins to the Laguna de Santa Rosa. The largest drainage basin includes Santa Rosa Creek, which drains the northern Santa Rosa area by six major creeks and various tributaries. Four creeks (Brush, Austin, Spring, and Matanzas) primarily

⁷¹ City of Santa Rosa General Plan 2035. “Water Supply,” Chapter 6, page 6-8.

⁷² City of Santa Rosa 2015 UWMP. “Table ES-1: Total Water Demands,” page ES-2.

drain the easterly portion, while Paulin and Piner Creeks drain the westerly portion. Santa Rosa Creek also drains stormwater runoff generated downtown and in surrounding neighborhoods. The number and location of creeks in northern Santa Rosa result in adequate stormwater drainage capacity in the northern area.⁷³ The City's Standard Urban Stormwater Mitigation Plan (SUSMP) requires projects to design and implement post-development measures to reduce the potential stormwater impacts to local drainages.⁷⁴

For solid waste, North Bay Corporation, operating as Santa Rosa Recycling & Collection, Inc. has provided solid waste and recycling services in the City of Santa Rosa since February 1, 2003. The North Bay Corporation collects and transports commercial and residential solid waste to the Central Disposal Site Transfer Station at 500 Meacham Road in the City of Petaluma. The Central Disposal Site has a daily permitted disposal of about 1,050 tons per day, and a remaining capacity of about 9 million cubic yards.⁷⁵ The 1999 Waste Characterization Study reported that residential waste disposal rates for Sonoma County were reported at 0.44 ton per resident per year.⁷⁶

The State of California has mandated a 50 percent waste diversion rate that must be met by all counties. In 2006, Sonoma County had a waste diversion rate of 67 percent. This rate is expected to rise, due to continued waste reduction programs such as composting, special waste, and household toxics. The County has also adopted several waste reduction initiatives, including the Carryout Bags Ordinance and Sonoma Green Business Program, to promote and divert the amount of waste away from landfills.⁷⁷

The City's existing water distribution system is divided into 18 major pressure zones, and several smaller sub-zones, that are served by pipelines ranging in diameter from 4 to 24 inches. The majority of services are provided via 6-inch to 12-inch diameter mains.⁷⁸ The City's Utilities Department is responsible for the operation and management of the Santa Rosa Subregional Water Reclamation System, which operates the Laguna Wastewater Treatment Plant (WWTP). The Laguna WWTP is a tertiary level treatment facility that has an average daily dry weather flow of 16.5 mgd and is permitted for 21.34 mgd average daily dry weather flow. Laguna WWTP serves the cities of Santa Rosa, Rohnert Park, Sebastopol, and Cotati. In 2015, Laguna WWTP treated an estimated 13,119 AF.⁷⁹ The primary point of discharge is via Delta Pond at the confluence of Santa Rosa Creek and Laguna de Santa Rosa. The North Coast Regional Water Quality Control Board (NCRWQCB) regulates wastewater discharges, which cannot exceed 5 percent of the Russian River flow.⁸⁰

⁷³ City of Santa Rosa General Plan 2035. "Stormwater Management," Chapter 6, page 6-13

⁷⁴ City of Santa Rosa General Plan Draft EIR, NPDES Program, page 4.H-6.

⁷⁵ City of Santa Rosa Draft General Plan EIR 2035. "Solid Waste," Utilities and Service Systems, page 4 G-7

⁷⁶ CalRecycle Solid Waste Characterization Database. "Residential Waste Disposal Rates"

⁷⁷ Sonoma County Waste Management Agency. 2016. "Recycling Guide."

⁷⁸ City of Santa Rosa 2015 UWMP. "Distribution Pipelines," Chapter 3, page 3-4

⁷⁹ City of Santa Rosa 2015 UWMP. "Table 6-6: Wastewater Collected Within Service Area in 2015, Chapter 6, page 6-14

⁸⁰ City of Santa Rosa 2015 UWMP. "Wastewater Disposal and Recycled Water Uses", Chapter 6, page 6-14

Would the Project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less than significant impact. Wastewater from the Project would mainly consist of effluent typical of residential units. Small quantities of hazardous household materials such as cleaning solvents may be present, but not in quantities sufficient to exceed treatment requirements. The Project would also be required to meet all applicable regulations, including NPDES permit requirements and those of the Regional Water Quality Control Board. Therefore, impacts would be less than significant.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than significant impact. As discussed above, the proposed Project's wastewater would not exceed the capacity of the City's wastewater treatment facility, and no new or expanded wastewater facilities would be required. According to the City's Sanitary Sewer System Master Plan Update, wastewater would be generated at an approximate rate of 50 gallons per capita per day (gpcd) for residential uses and 30 gpcd for nonresidential use. At its peak, the facility would accommodate 71 seniors and 50 faculty staff. The Project would generate 6,050 gpd of wastewater. There is substantial capacity at the Treatment Plant to serve the proposed Project, and implementation of the proposed Project would not exceed wastewater treatment requirements. Impacts would be less than significant.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than significant impact. The proposed Project would be served by existing stormwater facilities maintained by the City of Santa Rosa. Further, pursuant to the SUSMP, the Project would be required to implement stormwater best management practices that limit the volume and flow of stormwater to the municipal storm sewer system (Appendix E). Additionally, the City would require the Project to comply with the City's Water Efficient Landscape Ordinance, which would require the Project applicant to implement outdoor irrigation water conservation measures and practices. Therefore, overall, impacts would be less than significant.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less than significant impact. Based on current water demand projects for the Proposed Project, the City would have sufficient water supply. The Project consists of 49 living units, with a maximum of 71 residents at full occupancy. The Project would connect to the City's water facilities, similar to the existing residential uses nearby. The City of Santa Rosa has sufficient water supply to meet projected demand during normal years through 2040 and the Project is consistent with the land use and population assumptions of the General Plan. Since the Project is intended to provide care for a small number of residents, water usage is not expected to exceed current water supplies. No new or expanded water supply entitlements would be needed. Therefore, impacts would be less than significant.

- e) **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Less than significant impact. As discussed above, the Laguna WWTP has an average daily dry weather flow of 16.5 mgd and a capacity to treat 21 mgd. The proposed Project would be expected to produce approximately 6,050 gpd of wastewater. As such, there is sufficient capacity at the treatment plant to serve the proposed Project in addition to existing commitments. Impacts would be less than significant.

- f) **Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

Less than significant impact. As discussed above, there is sufficient landfill capacity available to accommodate the construction and operational phase of the Project. Central Disposal Site has a capacity of roughly 9,076,760 cubic yards and currently accepts approximately 2,500 tons daily. The California Integrated Waste Management Board provides a standard residential multi-family waste generation rate of 4.0 pounds per dwelling unit per day. Using this figure, the proposed Project would be expected to produce an estimated 196 pounds of solid waste per day. This represents a nominal percentage of the landfill facility's daily permitted capacity, and the facility would have adequate capacity to serve the Project. Therefore, impacts would be less than significant.

- g) **Comply with federal, state, and local statutes and regulations related to solid waste?**

Less than significant impact. Solid waste disposal services must follow federal, state, and local statutes and regulations related to the collection of solid waste. The Project proposes development of residential uses, which would not involve the production and/or disposal of any acutely toxic or otherwise hazardous materials. The proposed Project would comply with all state and local waste diversion requirements, including the City of Santa Rosa Ordinance 3586, which requires projects to meet at least a 50 percent diversion rate, and Municipal Code Chapter 9-12, regarding waste collection. As such, impacts would be less than significant.

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

Environmental Evaluation

- a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?**

Less than significant impact with mitigation incorporated. The Project would involve the construction of an assisted living facility adjacent to the Fountaingrove Golf and Athletic Club, and the implementation of a range of mitigation and actions designed to reduce impacts. With implementation of the proposed mitigation measures, impacts to biological resources, air quality, and cultural resources would be reduced to a less than significant level. While unlikely, there is the potential to uncover undiscovered archaeological, paleontological or human remains in the course of construction activities on-site, and accordingly mitigation would be required avoid the accidental destruction or disturbance of previously undiscovered cultural resources. Overall, with implementation of these mitigation measures, the Project would not substantially degrade the quality of the environment and associated impacts would be less than significant.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

Less than significant impact with mitigation incorporated. The Project would involve the construction of a 68,144-square-foot assisted living facility, providing up to 71 beds in 49 units. The facility would not require a change in the General Plan land use designation applicable to the site and would not conflict with the General Plan buildout projections. Potentially significant site-specific impacts to migratory birds and bats and previously undiscovered historical or cultural resources would be mitigated to less than significant levels with the implementation of MMs BIO-1a, BIO-1c, and CUL-1, and potential air quality impacts to sensitive receptors would be reduced to a less than significant level with implementation of MM AIR-1. Overall, with implementation of these mitigation measures, the Project would not substantially degrade the quality of the environment and associated impacts would be less than significant.

- c) **Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?**

Less than significant impact. Compliance with existing regulations and implementation of City of Santa Rosa standard permit conditions would ensure that the Project would not result in substantial adverse effects on human beings, including effects related to air pollution, seismic and geologic hazards, hazardous materials, flooding and natural disasters, or noise and vibration. Therefore, impacts would be less than significant.

SECTION 3: LIST OF PREPARERS

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PROJECT SPONSOR'S INCORPORATION OF MITIGATION MEASURES

As the project sponsor or the authorized agent of the project sponsor, I, **Steve McCullagh, Oakmont Senior Living, LLC.**, undersigned, have reviewed the Initial Study for **Oakmont at Emerald Isle** and have particularly reviewed all mitigation measures and monitoring programs identified herein. I accept the findings of the Initial Study and mitigation measures and hereby agree to modify the proposed project applications now on file with the City of Santa Rosa to include and incorporate all mitigation measures and monitoring programs set out in this Initial Study.



9-19-17

Project Sponsor (authorized agent)

Date