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DRAFT
Shiloh Crossing Project
Initial Study/Mitigated Negative Declaration
Town of Windsor, Sonoma County, California

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius (Centigrade)
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AERMOD	American Meteorological Society/EPA Regulatory Model
AFY	acre-feet per year
Air Basin	San Francisco Bay Area Air Basin
AMI	Adjusted Mean Income
APN	Accessor's Parcel Number
AQP	Air Quality Plan
ARB	California Air Resources Board
ASP	Age Sensitivity Factor
ASTM	American Society of Testing and Materials
ATCM	Airborne Toxic Control Measure
BA	Biological Assessment
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practices
BRA	Biological Resources Assessment
CAL FIRE	California Department of Forestry and Fire Protection
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARE	Community Air Risk Evaluation
CBC	California Building Standards Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act

CH_4	methane
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPF	Cancer Potency Factor
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CTS	California tiger salamander
dB	decibel
dBA	A-weighted decibel scale
DBR	Daily Breathing Rate
DOC	California Department of Conservation
DPM	diesel particulate matter
DPR	California Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
du/acre	dwelling units/acre
ED	Exposure Duration
EIR	Environmental Impact Report
EMFAC	Emission Factors
EPA	United States Environmental Protection Agency
ESL	Environmental Screening Level
EV	electric vehicle
EVA	Emergency Vehicle Access
FAH	Fraction of Time at Home
FAR	floor area ratio
FCS	FirstCarbon Solutions
FEMA	Federal Emergency Management Agency
FHC	fuel hydrocarbon
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHD	GHD Consultants
GHG	greenhouse gas
GIS	Geographic Information System

gpcd	gallons per capita per day
HI	hazard index
HOV	High Occupancy Vehicle
HRA	Health Risk Assessment
HVAC	heating, ventilation, and air conditioning
in/sec	inches/second
kBTU	kilo-British Thermal Unit
kWh	kilowatt-hours
L_{dn}	day/night average sound level
LEED™	Leadership in Energy and Environmental Design
L_{eq}	equivalent continuous sound level
LID	Low Impact Development
L_{max}	maximum noise/sound level
LOS	Level of Service
LRA	Local Responsibility Area
LRL	laboratory reporting limits
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MIR	Maximally Impacted Sensitive Receptor
MLD	Most Likely Descendant
MM	Mitigation Measure
mph	miles per hour
MS4	Municipal Separate Storm Sewer System
MTC	Metropolitan Transportation Commission
MUTCD	Manual on Uniform Control Traffic Control Devises
MWh	megawatt-hour
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NACTO	National Association of City Transportation Officials
NAHC	Native American Heritage Commission
NFHL	National Flood Hazard Layer
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSR	New Source Review
NWIC	Northwest Information Center
NWP	Northwestern Pacific Railroad

OEHHA	California Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PACE	Property Assessed Clean Energy
PCE	Primary Constituent Elements
PG&E	Pacific Gas and Electric Company
Phase I ESA	Phase I Environmental Site Assessment
PID	photo ionization detector
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PPV	peak particle velocity
PRC	Public Resources Code
PV	photovoltaic
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
REL	Reference Exposure Level
rms	root mean square
ROG	reactive organic gas
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCEIP	Sonoma County Energy Independence Program
SCRR	Sonoma County Resource Recovery
SCS	Sustainable Communities Strategy
SMART	Sonoma Marin Area Rail Transit
SO_2	sulfur dioxide
SOI	Sphere of Influence
Sonoma Water	Sonoma County Water Agency
SO_X	sulfur oxide
SR	State Route
SRA	State Responsibility Area
SSC	Special Species of Concern
State Water Board	California State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	Tribal Cultural Resource
TIS	Traffic Impact Study
TS	Transportation Study

UCMP	University of California Museum of Paleontology
US-101	U.S. Highway 101
USACE	United States Army Corp of Engineers
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle Miles Traveled
VOC	volatile organic compound
WD	Wetland Determination
WDR	Waste Discharge Requirements
WEAP	Worker Environmental Awareness Program
WUSD	Windsor Unified School District
WWTP	Wastewater Treatment Plant
ZNE	zero-net-energy

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SECTION 1: INTRODUCTION

1.1 - Purpose

The purpose of this Draft Initial Study/Mitigated Negative Declaration (Draft IS/MND) is to identify any potential environmental impacts that would result from implementation of the proposed Shiloh Crossing Project (proposed project) in the Town of Windsor, California. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15367, the Town of Windsor has discretionary authority over the proposed project and is the Lead Agency in the preparation of this Draft IS/MND and any additional environmental documentation required for the project.

The remainder of this section provides a brief description of the project location and the primary project characteristics. Section 2 includes an environmental checklist that provides an overview of the potential impacts that may result from project implementation, elaborates on the information contained in the environmental checklist, and provides justification for each checklist response. Feasible mitigations are analyzed to reduce all impacts to below a level of significance. Section 3 contains the List of Preparers.

1.2 - Project Location

The project site is located at 295 Shiloh Road in the Town of Windsor (Town) in Sonoma County (County), California (Exhibit 1) in the southeastern part of the Town. The 5.92-acre project site is located on Assessor's Parcel Number (APN) 163-171-039. The project site is bound by Shiloh Shopping Center and Hembree Road (west); a business incubator (north); Shiloh Road and undeveloped, vacant land (south); and Business Park Court and single-family homes (east) (Exhibit 2). The project site is located on the *Healdsburg, California,* United States Geographical Survey (USGS) 7.5-minute Topographic Quadrangle Map, Township 8 North, Range 8 West, Section 19 (Latitude 38°31'36" North; Longitude 122°45'43" West).

The project site is located within the boundaries of the Shiloh Road Village Vision Plan (Vision Plan), which was approved in 2001 and covers 79.62-acres in the southeastern portion of the Town (Exhibit 2 and Exhibit 3). The Vision Plan proposes a cohesive development framework for the area and includes design guidelines. The Vision Plan proposed up to 1,791 residential units and up to 807,523 square feet of commercial and office uses.

1.3 - Environmental Setting

The project site originally supported agricultural uses dating back to at least 1933. A trucking company occupied the project site from 1990 to 1999, consisting of cars, trucks, containers, as well as a residential building with a detached barn and several outbuildings. All buildings and structures were demolished in 2006, and the site is now vacant. [1]

[1] EBA Engineering. 2021. Phase I Environmental Site Assessment.

The project site is rectangular and is located at the northwest corner of Business Park Court and Shiloh Road. An approximately 5,000-square-foot stormwater detention basin enclosed by a chain link fence is located in the western portion of the project site. This stormwater detention system was designed to store additional flows caused by development of the business incubator project to the north and to release stormwater flows equivalent to predevelopment rates into the downstream public storm drain on Hembree Lane. An existing storm drain and swales are located along the project frontage bordering Shiloh Road, which carry flows from the southern portion of the project site to the public storm drain within Hembree Lane.[2]

The site is relatively flat (ranging from 120 to 130 feet above mean sea level)[3] with no depressions, other than the aforementioned stormwater detention basin. Vegetation on-site is composed predominately of non-native grasses including wild oats, yellow star-thistle, and weedy annuals and perennial forbs; native plants are largely absent.[4] Exhibit 4a and 4b illustrate existing site conditions.

Surrounding Land Uses

Table 1 summarizes the existing land uses surrounding the project site as well as the site's land use designation and zoning. As indicated in Table 1, surrounding lands to the north and west of the project site are not within the Vision Plan.

Table 1: Summary of Surrounding Land Uses

Direction	Existing Land Use Jurisdiction	Town of Windsor 2040 General Plan	Town of Windsor Zoning Ordinance	Shiloh Road Village Vision Plan
North	Business incubator project	Light Industrial	Light Industrial	Outside Vision Plan boundaries
East	Single-family residential	Medium Density Residential, High Density Residential, Boulevard Mixed Use	Medium Density Residential, High Density Residential, Boulevard Commercial	Shiloh Townhomes Mixed Use Shiloh Village Plaza
South	Shiloh Road and vacant land	Boulevard Mixed Use, Gateway Commercial	Boulevard Commercial, Gateway Commercial	Mixed Use
West	Shiloh Shopping Center	Gateway Commercial	Planned Development, Gateway Commercial	Outside Vision Plan boundaries
Source: Town of Windsor 2018.				

Existing General Plan Land Use Designation and Zoning

The Town of Windsor 2040 General Plan (General Plan), adopted on April 4, 2018, designates the northern portion of the project site as High Density Residential and the southern portion of the project site as Boulevard Mixed Use (Exhibit 5). The High Density Residential designation allows for

[2] Carlile Macy. 2021. Initial Hydrology and Hydraulics Study.
[3] EBA Engineering. 2021. Phase I Environmental Site Assessment.
[4] Bole & Associates. 2021. Biological Assessment and Wetland Determination for the Shiloh Crossing Project

compact, high density multi-family housing (16 to 32 dwelling units/acre [du/acre]) on sites that are served by transportation facilities and are located near major shopping areas. The Boulevard Mixed Use designation allows for mixed-use development that can include retail, residential, office, hotel, or entertainment uses with pedestrian-oriented frontages. This designation also allows for 16 to 32 du/acre and also specifies a floor area ratio (FAR) of between 0.50 to 2.0.[5]

As shown in Exhibit 6, the northern portion of the project site is zoned Compact Residential, and the southern portion is zoned Boulevard Commercial by the Town of Windsor Zoning Ordinance (Zoning Ordinance). According to the Zoning Ordinance, the Compact Residential zone allows for compact high density housing, especially for sites located near mixed-use developments and transit stops. Consistent with the High Density Residential land use classification of the General Plan, the allowable density in this zone ranges from 12 to 32 du/acre and the maximum allowable site coverage is 100 percent. The Boulevard Commercial zone is intended for intensive mixed-use development with pedestrian-oriented frontages for sites located near transit service. The Boulevard Commercial zone allows for recreation, education, public assembly, residential, retail, service, and communication uses, consistent with the Boulevard Mixed Use land use classification of the General Plan. The maximum allowable site coverage is 100 percent.

The proposed project would not require any changes to the existing land use designations or zoning. Pursuant to the existing land use and zoning designations, a total of 190 residential units could be permitted on-site.

Shiloh Road Village Vision Plan

The project site is located within the northwestern corner of the Vision Plan boundaries. The Vision Plan establishes a vision for a designed village, centered around a plaza, to evoke a sense of place and to promote an active lifestyle. The Vision Plan designates the northern half of the project site as "Garden Apartments" and the southern half of the project site as "Mixed Use West" (Exhibit 6). The concept plan for the "Garden Apartments" designation calls for a 1- to 3- story apartment complex (24-32 du/acre) with parking provided in an underground structure, carports, and on-street spaces. The "Mixed Use West" designation encourages neighborhood conveniences such as grocery stores, bakeries, coffee shops, restaurants, and bed and breakfast inns.

1.4 - Project Description

1.4.1 - Land Uses

The proposed project would result in the construction of a 201,050-square-foot high density, mixed-use residential development for Mixed-Income occupants, or occupants earning 80 percent of Adjusted Mean Income (AMI) and below. The proposed project would consist of 173 apartment dwellings, a Community Center, and 8,000 square feet of commercial space in two buildings: the South Building and the North Building. Table 2 illustrates the proposed project components; Exhibit 7 depicts the site plan.

[5] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Website: https://www.townofwindsor.com/DocumentCenter/View/21498/Final-Town-of-Windsor-2040-General-Plan_2018-06-04. Accessed July 8, 2022.

South Building

The South Building, located along Shiloh Road, would consist of a 61,420-square-foot, 4-story building with 8,000 square feet of ground floor commercial and retail space. The South Building would contain 43 multi-family residential units, each with either 60 square feet or 100 square feet of private outdoor deck space. There would be 17 1-bedroom apartments, six 2-bedroom apartments, and 20 3-bedroom apartments. On the bottom floor, there would be two commercial areas separated by a 1,000-square-foot outdoor plaza, which would provide an outdoor dining area for any restaurant tenants. The north end of the plaza area would contain a covered arched portal entryway centered on the main entrance the North Building at the interior of the site (Exhibit 7). Each floor would contain a lobby area. The second floor would feature a 625-square-foot library and lounge as well as one 700-square-foot deck and a 1,400-square-foot deck.

North Building

The North Building would consist of a 139,630-square-foot, 5-story building containing a total of 125 apartments. The building would contain 15 studio apartments, 53 1-bedroom apartments, 38 2-bedroom apartments, and 24 3-bedroom apartments. Semi-private outdoor space would be provided in ground floor patios and upper floor balconies at each of the apartment units. Several amenities, including a 2,000-square-foot community room with a patio, a 600-square-foot business center, a 300-square-foot administrative office, a 600-square-foot fitness room, a mail room, and bicycle storage room. The North Building would be wrapped around a 29,000-square-foot landscaped courtyard, two barbecue and dining areas, a play structure, a bocce court, and a swimming pool with lounge spaces on the pool deck.

Table 2: Proposed Project Components

Building	Building Square Footage	Stories	Commercial Space	Type of Unit	Number of Residential Units
South Building	61,420	4	8,000 square feet	1-bedroom	17
				2-bedroom	6
				3-bedroom	20
North Building	139,630	5	None	Studio	15
				1-bedroom	53
				2-bedroom	38
				3-bedroom	24
Total	**201,050**	**N/A**	**8,000 square feet**	**N/A**	**173**

Architectural Design

The proposed buildings would be Spanish, Post-colonial Monterey style, adhering to the Shiloh Vision Plan. Wall materials would include exterior stucco plaster in an earth-toned tan color and cream tones, deep overhangs with exposed eaves, barrel clay tile roofing, ornamental guardrails, accents of glazed tiles on exterior walls, and arched and corbeled forms which inherent plasticity of

the stucco exterior building material. Arched portals signifying the formal public entrances to the South and North Buildings would act as transitional spaces between the public exterior and private interior domains (Exhibit 8).

1.4.2 - Landscaping

Trees would be planted along the perimeters of both the North and South Buildings, along Shiloh Road and Business Park Court, and throughout the project site. Shrubs would be planted along the western perimeter and alongside all amenities and both project buildings. Artificial Turf would be placed in the landscaped courtyard area and adjacent to the along the bocce court. A 7,500-square-foot community garden at the northeast portion of the project site. Landscaping would make up 36 percent of the project site (Exhibit 9).

Stormwater Drainage

The proposed project would feature a 9,821-square-foot rain garden at the northern end of the project site that would provide sufficient capacity to capture stormwater and meter them into local waterways to ensure no net increase in off-site flow.

1.4.3 - Access, Circulation, and Parking

Vehicular access would be provided by two driveways along Business Park Court. A private drive would wrap around the entire North Building, providing access to parking areas (Exhibit 7). An Emergency Vehicle Access (EVA) road would be provided at the southwest corner of the project site and connect to the Private Drive, which provides access to both the North and South Building. The proposed project would also provide designated pick up and drop off areas for ride sharing and ride hailing companies in front of the commercial space along Shiloh Road.

For multi-family developments, the Zoning Ordinance requires two covered parking stalls per residential unit, one additional parking stall per each bedroom over three, and guest parking stall at a ratio of one uncovered parking stall per unit. For general retail stores, the Zoning Ordinance requires one parking stall for each 200 square feet of floor area. Based on the 173 proposed residential units and associated commercial space, the Zoning Ordinance would require 346 covered parking spaces, 173 uncovered guest parking spaces, and 40 parking spaces allocated for the commercial space, for a total of 559 on-site parking spaces.

The proposed project would provide a total of 297 parking spaces, including 257 on-site spaces, 40 off-site spaces, and 144 covered carport spaces. A summary of the proposed parking features is provided in Table 3.

The proposed project would not meet the requirements of the Zoning Ordinance; however, because the proposed project is providing affordable housing units, the project applicant is only subject to required parking ratios pursuant to Government Code Section 65915 (State Density Bonus Law). Government Code Section 65915 provides the following guidance for parking ratios, to be applied to eligible projects:

> " . . . upon the request of the developer, a city . . . .shall not require a vehicular parking ratio, inclusive of parking for persons with a disability and guests . . . that exceeds the following ratios:
>
> (A) Zero to one bedroom: one on-site parking space.
> (B) Two to three bedrooms: one and one-half on-site parking spaces.
> (C) Four and more bedrooms: two and one-half parking spaces.

Based on the direction provided by Government Code 65915, the proposed project would be required to have 217 on-site residential spaces in addition to the 40 spaces required for commercial use, for a total of 257 on-site parking spaces.[6] The proposed project as designed includes a total of 297 parking spaces, which exceeds the 257 spaces that would be required pursuant to Government Code 65915.

The on-site parking area would provide carports that are designed to host photovoltaic (PV) solar arrays. All on-site parking would be concealed from public view on Shiloh Road by the proposed buildings or landscape screening. The 40 off-site parking stalls would be parallel parking along Business Park Court and Shiloh Road.

Table 3: Proposed Parking Features

Location	Covered/Uncovered	Type of Parking	Number of Stalls
On-site	Covered	Carport	144
	Uncovered	ADA compliant	10
		Van-ADA compliant	2
		Compact	68
		Standard	28
		Standard EV	4
		ADA compliant EV	1
Total On-site Parking			**257**
Off-site–Shiloh Road	Uncovered	Public Street/Parallel	6
Off-site–Business Park Court	Uncovered	Public Street/Parallel	34
Total Off-site Parking			**40**
Total Proposed Parking			**297**
Parking required pursuant to Government Code Section 65915			**257**

Notes:
ADA = Americans with Disabilities Act
EV = electric vehicle

[6] (15 studio apartments*1 parking space/apartment) + (70 1-bedroom apartments *1 parking space/apartment) + (44 2-bedroom apartments *1.5 parking spaces/apartment) + (44 3-bedroom apartments *1.5 parking spaces/apartment) = 217 residential parking spaces + 40 commercial parking spaces = 257 on-site parking spaces.

Alternative Transit

Sixty-eight bicycle parking spaces would be provided by the proposed project, 40 of which would be in the bicycle storage room. Additionally, the project site is located within 0.75-mile of three bus stops and within 0.5-mile of parks, retail, and business centers, allowing for convenient pedestrian access to neighborhood features. Off-site improvements (described below) would further promote alternative modes of transit.

1.4.4 - Off-site Improvements

Proposed off-site improvements include 40 parallel on-street parking spaces, bicycle lanes, sidewalks, and planting areas along Shiloh Road and Business Park Court. Business Park Court would be widened from 24 feet to 38 feet.

1.4.5 - Sustainability Features

Energy

The parking area would provide carports that are designed to host PV solar arrays. The proposed project would meet zero-net-energy standards by providing the following features:

- Sealed attic and flat cool roof (e.g., high-insulation roof design)[7]
- High performance exterior walls (e.g., high-insulation wall materials)[8]
- Overhangs over fenestration in the patios to provide shading (e.g., energy efficient design)
- Low E windows and doors (e.g., high-insulation window and door materials)[9]
- Heating, ventilation, and air conditioning (HVAC) ductwork in conditioned space (e.g., energy efficient design)[10]

Water Conservation

The proposed project would feature water efficient landscaping. Although 687,820 gallons of water per year would be permitted for landscaping use pursuant to Section 12-3-900 of the Windsor Water Code, the proposed project would only require an estimated 515,013 gallons of water per year, based on the proposed planting palette.

1.4.6 - Utilities

The proposed project is located within the service areas of the following utility service providers:

Water: The proposed project would obtain water from the Windsor Water District.

[7] Minimum 0.65 Aged Solar Reflectance and 0.85 Initial Thermal Emissivity
[8] Would reduce the amount of heat transfer through walls and subsequently reduce heating, ventilation, and air conditioning (HVAC) loads.
[9] Low-emissivity glass windows have a microscopically thin coating that is transparent and reflects heat. Therefore, it minimizes the amount of infrared and ultraviolet light that comes through the glass, without minimizing the amount of incoming light.
[10] Installing ducts inside a home's conditioned space can significantly reduce energy loads and utility bills and improve air quality.

Wastewater: The Windsor Public Works Department, Water Reclamation Division, is responsible for the treatment, storage, and disposal of the Town's wastewater.[11]

Stormwater: The Town does not operate a separate drainage system that treats stormwater. Instead, runoff from impervious surfaces is channeled directly into local waterways.[12]

Solid Waste: Sonoma County Waste Management would provide solid waste services for the project site.[13]

Electricity and Gas: Pacific Gas and Electric Company (PG&E) would provide electricity and gas to the project site.[14]

Section 2.18, Utilities and Service Systems, provides more specifics about utility tie-ins.

1.4.7 - Project Schedule and Phasing

Implementation of the proposed project would include removal of all existing vegetation and demolition of structures, including the stormwater detention basin, as well as site grading, paving, and construction of the mixed-use development. The construction phases and approximate dates for their duration are outlined below:

- Site preparation (2 weeks): During this phase, the project site would be readied for construction, including removal of existing vegetation and the stormwater detention basin.
- Grading (6 weeks): During this phase, grading of the entire project site would occur.
- Construction (88 weeks): This phase includes construction of the drive-through vehicle wash tunnel, vacuum canopies, and associated facilities.
- Architectural Coating (4 weeks): This phase involves the application of architectural coatings, which would begin during building construction activities.
- Paving (4 weeks): This phase includes paving and striping of the parking areas and driveways, as well as construction of building setbacks, side yards, and signage.

The proposed project is anticipated to be constructed over a 24-month period, from January 2023 through December 2024. The anticipated opening year for the project is 2024.

1.5 - Required Discretionary Approvals

The Town of Windsor has discretionary authority over the proposed project and is the CEQA Lead Agency for the preparation of this Draft IS/MND. In order to implement the proposed project, the following permits and/or approvals would need to be granted:

[11] Town of Windsor. Wastewater Treatment and Storage Facilities. Website: https://www.townofwindsor.com/226/Wastewater-Treatment-Storage-Facilities. Accessed July 8, 2022.
[12] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Website: https://www.townofwindsor.com/DocumentCenter/View/21498/Final-Town-of-Windsor-2040-General-Plan_2018-06-04. Accessed July 8, 2022.
[13] Zero Waste Sonoma. About Us. Website: https://zerowastesonoma.gov/about. Accessed July 8, 2022.
[14] Pacific Gas and Electric Company (PG&E). Website: https://www.pge.com/en_US/about-pge/about-pge.page Accessed July 8, 2022.

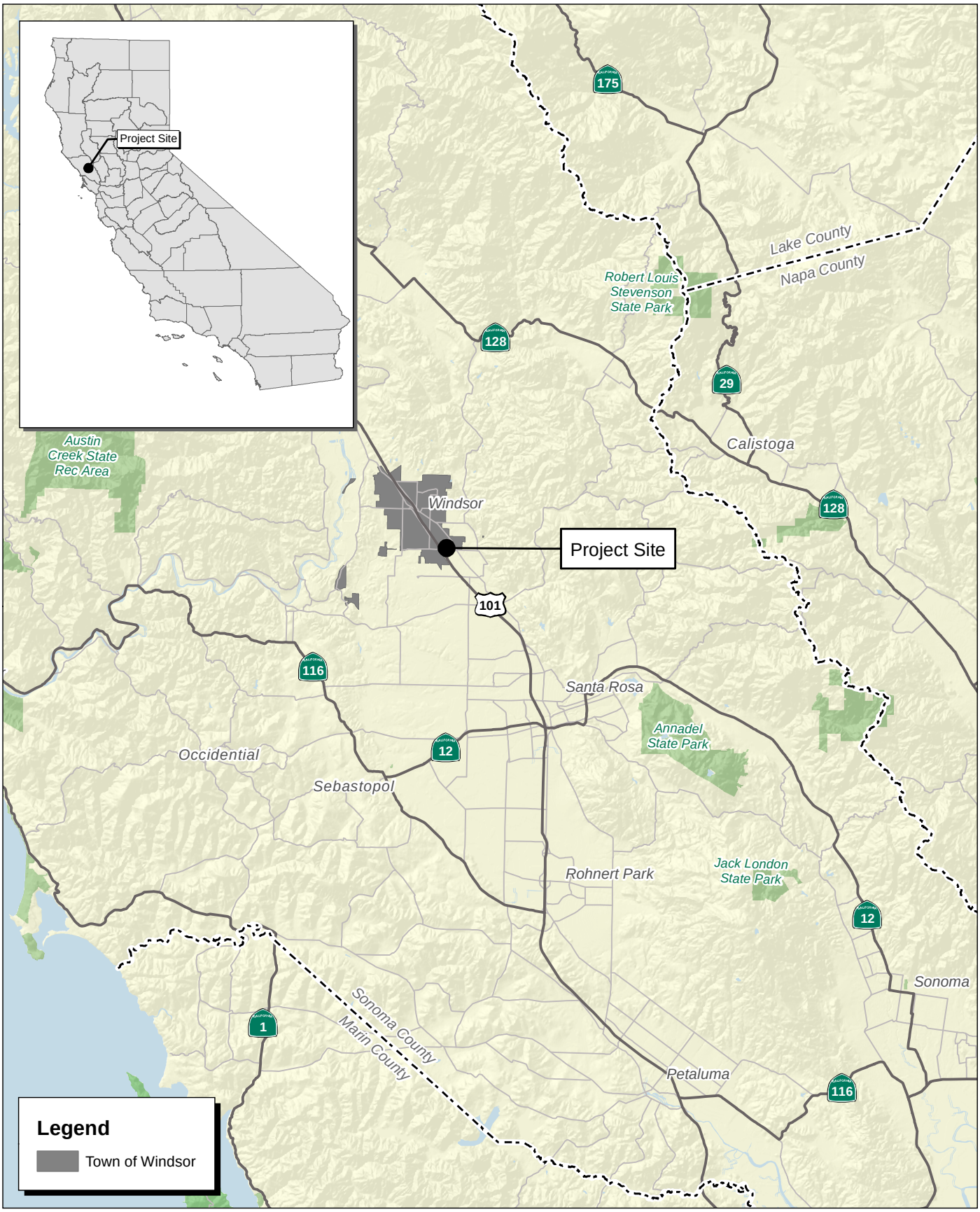
- Approval of the Draft IS/MND
- Site Plan and Design Review

1.6 - Intended Uses of this Document

This Draft IS/MND has been prepared to document the potential significant adverse environmental impacts associated with the proposed project and identify feasible mitigation that would reduce impacts to below a level of significance. 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 comments concerning the analysis contained in the Draft IS/MND should be sent to:

Kim Voge, Planner III
Town of Windsor
Community Development Department
9291 Old Redwood Highway
Windsor, CA 95492
Phone: 707.687.8580
Email: kvoge@townofwindsor.com

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Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

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5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

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Source: Bing Aerial Imagery.

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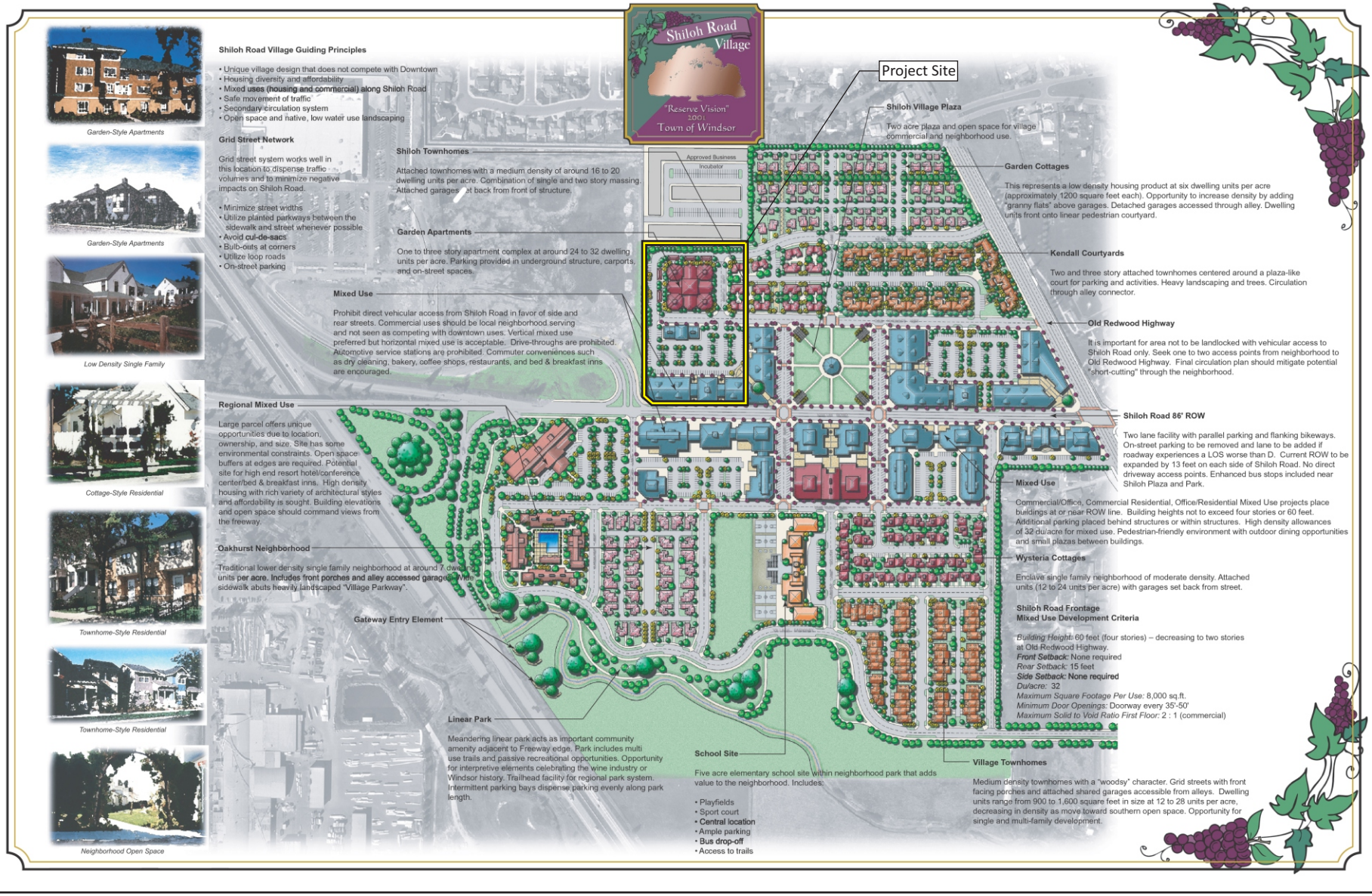
1,000 500 0 1,000 Feet

Exhibit 2
Local Vicinity Map

32490019 • 06/2022 | 2_local_vicinity.mxd

TOWN OF WINDSOR
SHILOH CROSSING PROJECT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

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Source: Shiloh Road Village Vision Plan, September 4, 2021.

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Exhibit 3
Shiloh Road Village Vision Plan

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Exhibit 4a
Project Site from Shiloh Road

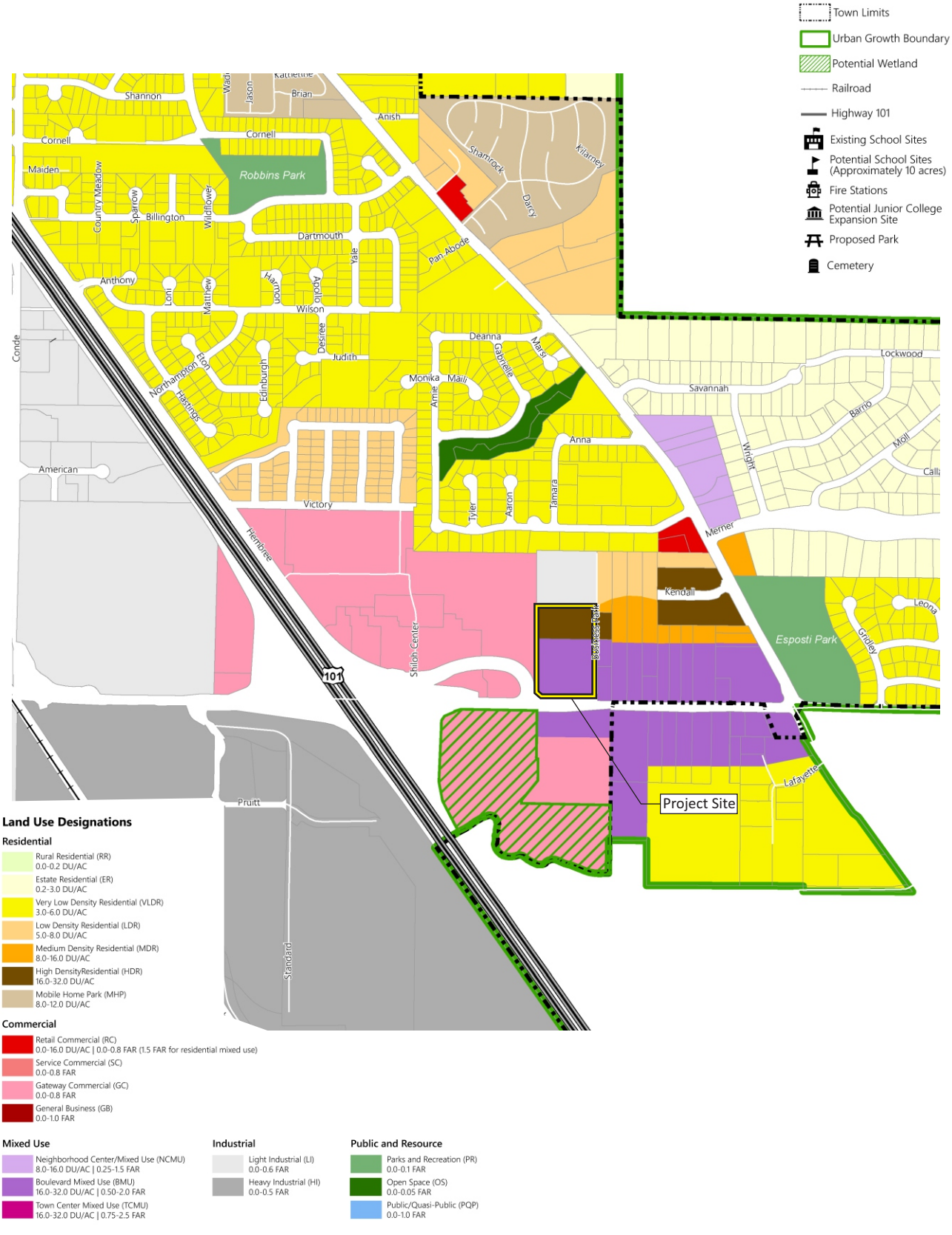
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Exhibit 4b
Stormwater Detention Basin

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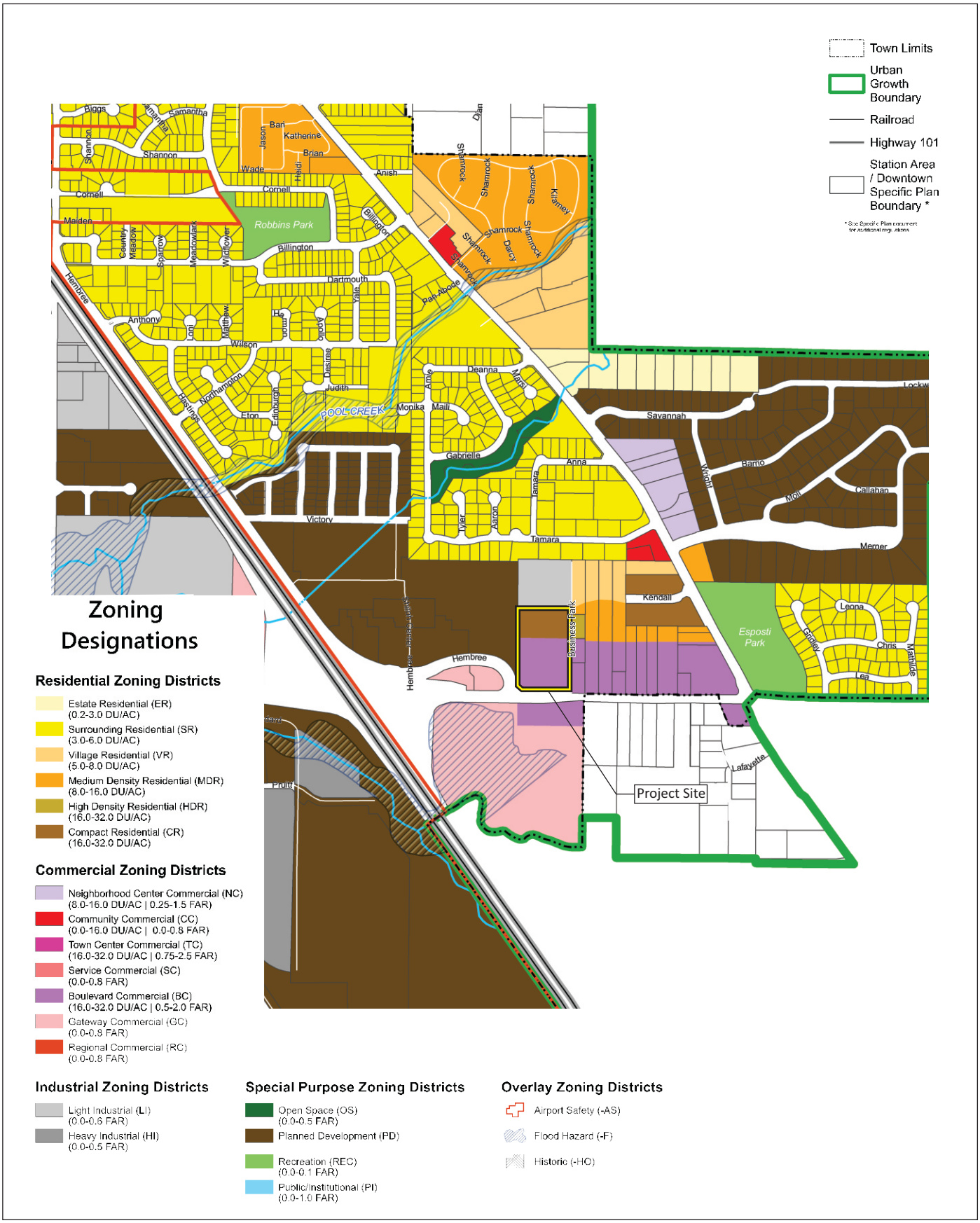


Source: Town of Windsor 2018.

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Exhibit 5
General Plan Land Use Map

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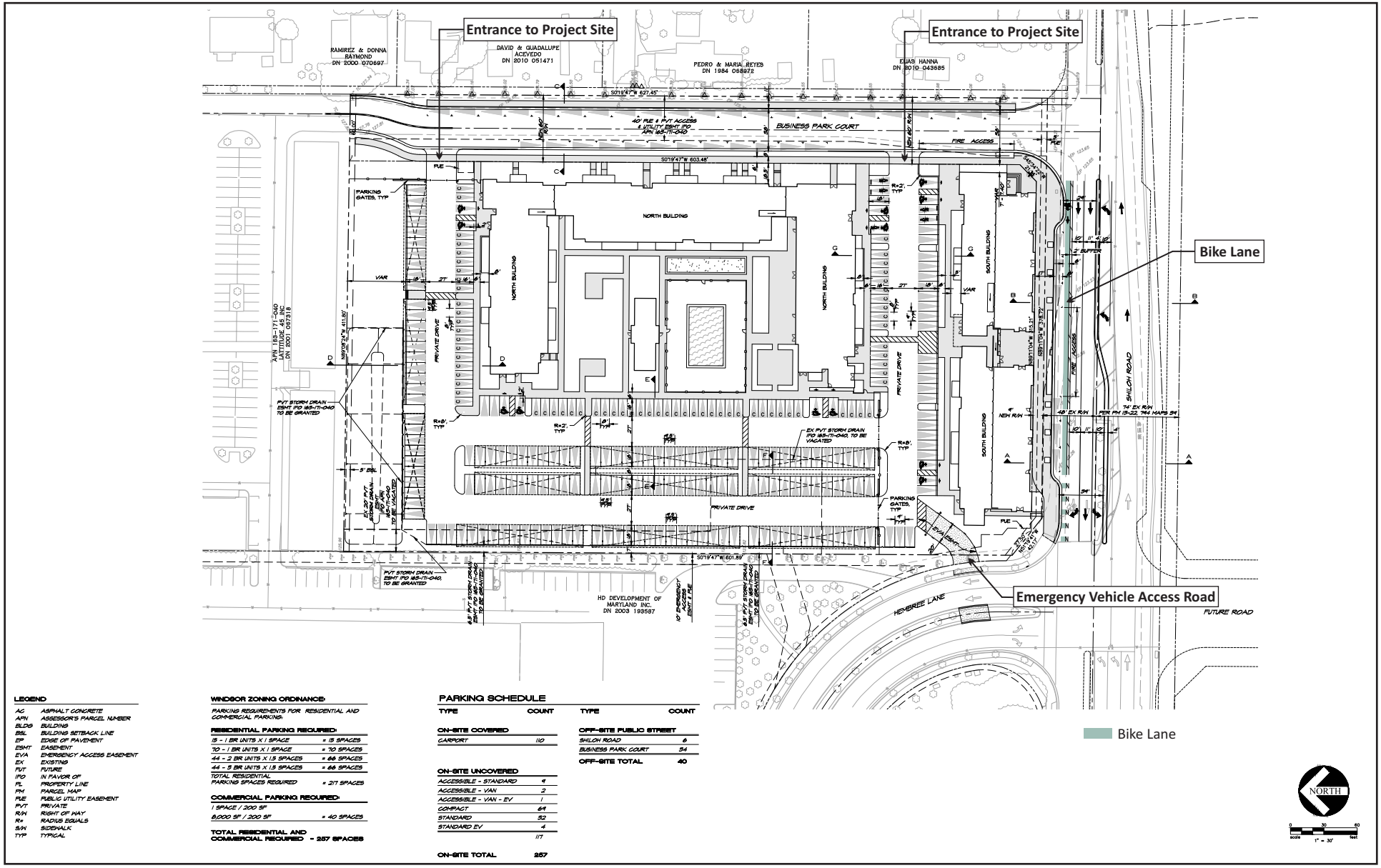


Source: Town of Windsor 2019

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Exhibit 6
Zoning Code Map

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LEGEND

AC	ASPHALT CONCRETE
APN	ASSESSOR'S PARCEL NUMBER
BLDG	BUILDING
BSL	BUILDING SETBACK LINE
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EVA	EMERGENCY ACCESS EASEMENT
EX	EXISTING
FUT	FUTURE
IFO	IN FAVOR OF
PL	PROPERTY LINE
PM	PARCEL MAP
PUE	PUBLIC UTILITY EASEMENT
PVT	PRIVATE
R/W	RIGHT OF WAY
R=	RADIUS EQUALS
S/W	SIDEWALK
TYP	TYPICAL

WINDSOR ZONING ORDINANCE:

PARKING REQUIREMENTS FOR RESIDENTIAL AND COMMERCIAL PARKING:

RESIDENTIAL PARKING REQUIRED:

19 - 1 BR UNITS X 1 SPACE	= 19 SPACES
70 - 1 BR UNITS X 1 SPACE	= 70 SPACES
44 - 2 BR UNITS X 1.5 SPACES	= 66 SPACES
44 - 3 BR UNITS X 1.5 SPACES	= 66 SPACES
TOTAL RESIDENTIAL PARKING SPACES REQUIRED	= 217 SPACES

COMMERCIAL PARKING REQUIRED:

1 SPACE / 200 SF	
8,000 SF / 200 SF	= 40 SPACES

TOTAL RESIDENTIAL AND COMMERCIAL REQUIRED - 257 SPACES

PARKING SCHEDULE

TYPE	COUNT
ON-SITE COVERED	
CARPORT	110
ON-SITE UNCOVERED	
ACCESSIBLE - STANDARD	4
ACCESSIBLE - VAN	3
ACCESSIBLE - VAN - EV	1
COMPACT	64
STANDARD	52
STANDARD EV	4
	117
ON-SITE TOTAL	257

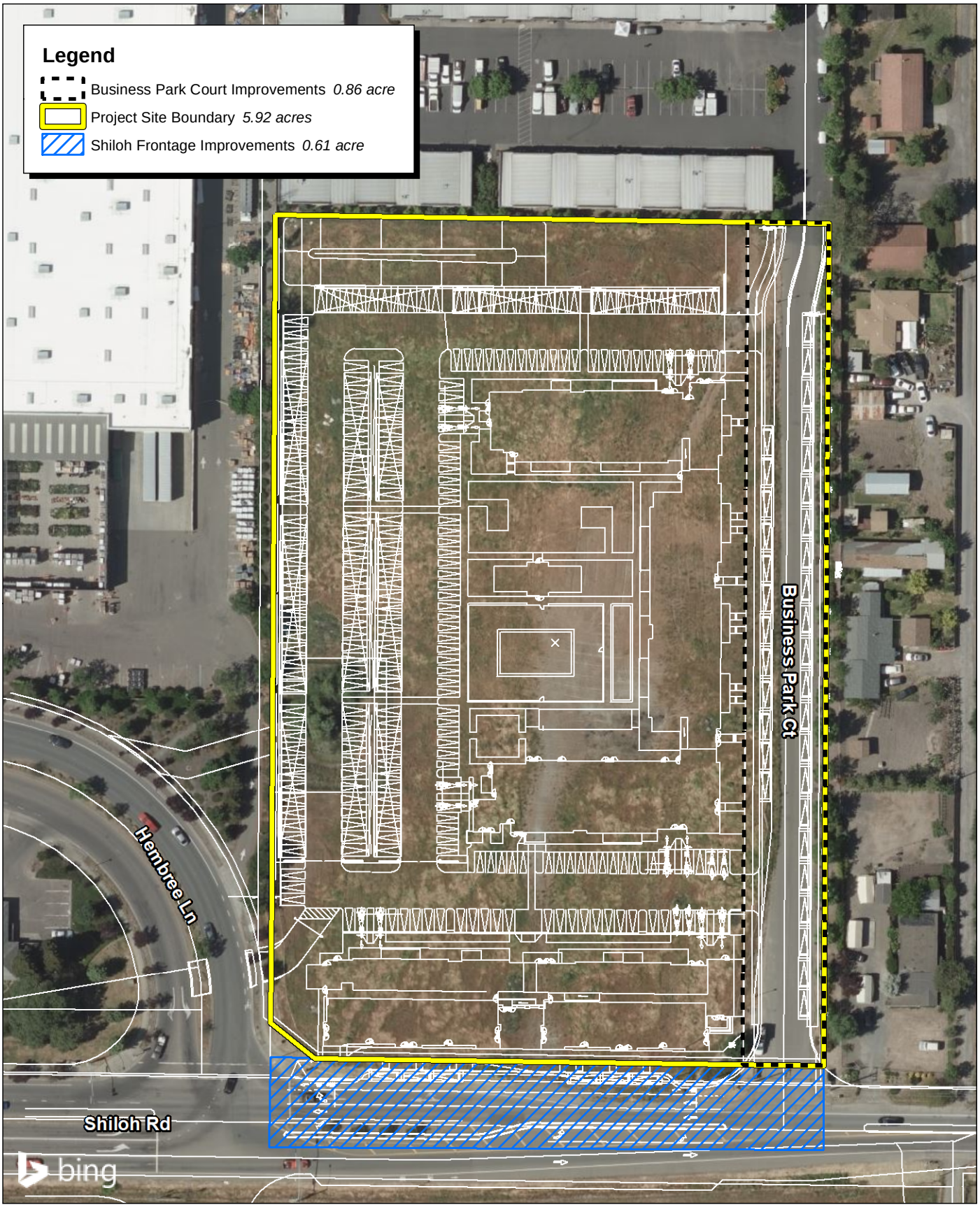
TYPE	COUNT
OFF-SITE PUBLIC STREET	
SHILOH ROAD	6
BUSINESS PARK COURT	34
OFF-SITE TOTAL	40

Source: Carlile & Macy. Y & M Architects, 7/22/2022.

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Exhibit 7
Site Plan

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Source: Bing Aerial Imagery. CARLILE • MACY, 2022.

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100 50 0 100 Feet

Exhibit 8
Project Off-site Roadway and Frontage Improvements

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Exhibit 9
Shiloh Road Frontage

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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.					
☐	Aesthetics	☐	Agriculture and Forestry Resources	☒	Air Quality
☒	Biological Resources	☐	Cultural Resources	☐	Energy
☒	Geology/Soils	☐	Greenhouse Gas Emissions	☒	Hazards/Hazardous Materials
☐	Hydrology/Water Quality	☒	Land Use/Planning	☐	Mineral Resources
☒	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☒	Transportation	☒	Tribal Cultural Resources
☐	Utilities/Services Systems	☐	Wildfire	☐	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: 8/25/22 Signed: Kim Voge

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.1 Aesthetics *Except as provided in Public Resources Code Section 21099, would the project:*				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a State Scenic Highway?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Environmental Evaluation

Setting

The Town is located in the Russian River Valley, approximately 2 miles from the Russian River. The valley is surrounded by gentle rolling hills and characterized by oak trees, grassland, and other vegetation. This natural setting combined with the Town's relatively compact development pattern give the Town a rural, small-town feel. U.S. Highway 101 (US-101) is the main north and southbound access point and offers views of the surrounding foothills and open space areas such as agricultural land, creeks, and woodland areas which offer scenic value from a number of vantage points.

The General Plan has goals and policies that aim to preserve scenic resources such as rural lanes, scenic roads, and natural features such as woodland areas, foothills, and mountains. The Town does not have any officially designated ridgelines in the General Plan. However, it does designate scenic corridors and landforms. General Plan Goals ER-9.1 and ER-9.2 aim to preserve significant landforms surrounding the community and maintain significant views from major corridors.[15]

The closest designated scenic corridors to the site are US-101, Conde Lane, Pleasant Avenue, and Fraught Road. The site can be seen at a distance from US-101 northbound, located approximately

[15] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Website: https://www.townofwindsor.com/DocumentCenter/View/21498/Final-Town-of-Windsor-2040-General-Plan_2018-06-04. Accessed March 9, 2022.

1,200 feet southwest of the project site. The project site is not visible from the other designated scenic corridor roadways. There are no designated scenic resources on or near the project site. [16]

The Town has implementation programs that protect scenic resources through scenic corridor design standards, environmental review of projects along scenic corridors and slopes, scenic corridor enhancement programs, and coordination with neighboring jurisdictions on development proposals.[17]

The Vision Plan proposes a development framework for the area along both sides of Shiloh Road between US-101 and Old Redwood Highway. The Vision Plan contains design guidelines for new development.[18] Information in this section is based on the Vision Plan as well as the General Plan Environmental Resources Element.[19]

The 5.92-acre project site is bound by Shiloh Shopping Center and Hembree Road (west); a business incubator (north); Shiloh Road and undeveloped, vacant land (south); and Business Park Court and single-family homes (east).

The project site is relatively flat and does not contain foothills or mountains.

Would the project:

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

Less than significant impact. There are no designated scenic resources on or near the project site. [20] The project site is relatively flat and does not contain foothills or mountains. In addition, intervening trees, development, and flat topography obstruct most views from the project site of distant scenic landforms such as foothills and mountains to the east and west.

The primary scenic vistas in the Town are wooded ridges, hillsides, and ridgelines. The Town does not have any officially designated ridgelines in the General Plan. However, it does designate scenic corridors and landforms, as described above. General Plan Goals ER-9.1 and ER-9.2 aim to preserve significant landforms surrounding the community and maintain significant views from major corridors. The project site is not located on a designated scenic corridor.[21] Therefore, development of the proposed project would not result in a substantial effect on a scenic vista. Impacts would be less than significant.

[16] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Website: https://www.townofwindsor.com/DocumentCenter/View/21498/Final-Town-of-Windsor-2040-General-Plan_2018-06-04. Accessed March 9, 2022.
[17] Ibid.
[18] Town of Windsor. 2001. Shiloh Road Village. Website: https://www.townofwindsor.com/DocumentCenter/View/109/Shiloh-Road-Vlg-Vision-Plan-Guiding-Principles-12?bidId=. Accessed March 9, 2022.
[19] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Website: https://www.townofwindsor.com/DocumentCenter/View/21498/Final-Town-of-Windsor-2040-General-Plan_2018-06-04. Accessed March 9, 2022.
[20] Ibid.
[21] Ibid.

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

Less than significant impact. The nearest officially designated State Scenic Highway is State Route (SR) 116, located approximately 6.74 miles to the southwest.[22] The proposed project would not be visible from SR-116, due to intervening trees and development. Therefore, the proposed project would not substantially damage scenic resources such as trees, rock outcroppings, and historic buildings within view from a State Scenic Highway.

The General Plan designates US-101 and other rural roads in the Town as scenic corridors. The southern portion of the proposed project would be visible from part of US-101 northbound. However, the proposed project would have a maximum height of 60 feet, which would not obstruct views of agricultural lands, woodlands, or the surrounding foothills from this scenic corridor. No impact would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than significant impact. The 5.92-acre project site is bound by Shiloh Shopping Center and Hembree Road (west); a business incubator (north); Shiloh Road and undeveloped, vacant land (south); and Business Park Court and single-family homes (east). Therefore, the area surrounding the project site is considered urbanized.

The northern portion of the project site is zoned Compact Residential and the southern portion is zoned Boulevard Commercial. The northern portion of the project site has a land use designation of High Density Residential and the southern portion of the project site is designated as Boulevard Mixed Use. Both the High Density Residential and the Boulevard Mixed Use land use designations allow for 16 to 32 du/acre. The Boulevard Mixed Use designation specifies an FAR between 0.50 to 2.00. The proposed project would have a density of approximately 29 du/acre and an FAR of approximately 0.6; which would be consistent with these land use designations.

Furthermore, the proposed project would be required to follow the Design Guidelines provided by the Vision Plan. The Vision Plan was adopted in 2004 with an Environmental Impact Report (EIR), which considered aesthetic impacts.[23] The EIR concluded that implementation of the Vision Plan would create a significant and unavoidable impact because it proposed conversion of a sparsely developed rural setting to a highly suburbanized environment. The Vision Plan envisioned mixed-use development and residential character at the project site, and allows for a maximum building height

[22] California Department of Transportation (Caltrans). 2022. Scenic Highways. California State Scenic Highways. Website: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed March 9, 2022.

[23] Town of Windsor. 2004. Shiloh Road Vision Plan. General Plan and Zoning Ordinance Amendments. Draft Environmental Impact Report. September.

of 60 feet. The proposed project would have a maximum building height of 60 feet and would therefore be consistent with Vision Plan standards. 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 currently vacant and has no existing sources of light and glare. The proposed project would construct 173 apartment dwellings, a Community Center, and 8,000 square feet of commercial space in two buildings. As a result, the proposed project would introduce light and glare sources to the project site and directly surrounding areas. The new sources of light would come from the interior and exterior lighting as well as some glare reflecting off surfaces. The proposed project would comply with applicable General Plan and zoning code regulations regarding the lighting design and building materials designed to limit trespass-lighting and glare per Section 27.20.030 of the Zoning Code. Impacts would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.2 Agriculture and Forestry Resources *In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California 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:*				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

Environmental Evaluation

Setting

The California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP) produces maps that display farmland within the State. The DOC Inventory Map confirms that the project site is classified as Farmland of Local Importance and Urban and Built-Up Land.[24] The General Plan designates the northern portion of the project site as High Density Residential and the

[24] California Department of Conservation (DOC). 2016. California Important Farmland Finder. Website: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed March 8, 2022.

southern portion of the project site as Boulevard Mixed Use. The project site is not zoned for forest land or timberland. There are no designated forest areas within the project site or its vicinity.

Would the project:

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

No Impact. As previously stated, the DOC FMMP mapping for the Town designates the project site as Farmland of Local Importance and Urban and Built-Up Land. The project site does not contain any lands designated as Prime farmland, Unique farmland, or farmland of Statewide Importance. Therefore, the proposed project would not convert any such lands to nonagricultural use.

b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?

No impact. The General Plan designates the northern portion of the project site as High Density Residential and the southern portion of the project site as Boulevard Mixed Use. The project site is not subject to a Williamson Act Contract.[25] Therefore, no impact 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 General Plan designates the northern portion of the project site as High Density Residential and the southern portion of the project site as Boulevard Mixed Use. The project site is not zoned for forest land or timberland. Therefore, no impact would occur.

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

No impact. As previously stated, the DOC FMMP mapping for the Town designates the project site as Farmland of Local Importance and Urban and Built-Up Land. The project site does not contain forest land or forestry uses. Therefore, no impact would occur.

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

Less than significant impact. As described above, the DOC FMMP mapping for the Town designates the project site as Farmland of Local Importance and Urban and Built-Up Land. The proposed uses are consistent with the underlying General Plan and zoning designations as expressed in the Vision Plan. The area surrounding the project site is also designated either Farmland of Local Importance and Urban and Built-Up Land. The area to the south of the project site currently contains agricultural

[25] County of Sonoma Permit and Resource Management Department. 2019. Williamson Act 2019 Calendar Year. Website: file:///C:/Users/mdolan/Downloads/Williamson%20Act%20Land%20Contracts%20Calendar%20Year%202019%20(2).pdf. Accessed March 8, 2022.

uses. However, this area is designated Boulevard Mixed Use and Gateway Commercial in the General Plan. Therefore, impacts would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.3 Air Quality *Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.* *Would the project:*				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors or) adversely affecting a substantial number of people?	☐	☐	☒	☐

Environmental Evaluation

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Setting

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 Pollutants

Air pollutants relevant to the CEQA checklist questions for Air Quality are briefly described below.[26]

- Ozone is a gas that is formed when reactive organic gases (ROGs) and oxides of nitrogen (NO_X)—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are conducive to its formation. Health effects can include, but not be limited to irritated respiratory system, reduced lung function, and aggravated chronic lung diseases.
- ROGs, or volatile organic compounds (VOCs), are defined as any compound of carbon—excluding carbon monoxide (CO), carbon dioxide (CO_2), carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical

[26] California Air Resources Board (ARB). 2022. Common Air Pollutants. Website: https://ww2.arb.ca.gov/resources/common-air-pollutants. Accessed June 7, 2022.

reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably.

- Nitrogen dioxide (NO_2) forms quickly from NO_X emissions. Health effects from NO_2 can include the following: potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contribution to atmospheric discoloration; increased visits to hospital for respiratory illnesses.
- CO is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines—unlike ozone—and motor vehicles operating at slow speeds are the primary source of CO in the project region, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Potential health effects from CO depends on exposure and can include slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.
- Sulfur dioxide (SO_2) is a colorless, pungent gas. At levels greater than 0.5 parts per million (ppm), the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_X) include SO_2 and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although SO_2 concentrations have been reduced to levels well below State and federal standards, further reductions are desirable because SO_2 is a precursor to sulfate and particulate matter less than 10 microns in diameter (PM_{10}).
- PM_{10} and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in populated areas, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities. Health effects from short-term exposure (hours/days) can include the following: irrigation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. Health effects from long-term exposure can include the following: reduced lung function; chronic bronchitis; changes in lung morphology; or death.
- Toxic air contaminants (TACs) refer to a diverse group of air pollutants that can affect human health but have not had ambient air quality standards established for them. Diesel particulate matter (DPM) is a toxic air contaminant that is emitted from construction equipment and diesel fueled vehicles and trucks. Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.

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. For purposes of this assessment, the significance thresholds recommended by the Bay Area Air Quality Management District (BAAQMD) were applied herein.

Would the project:

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

Less than significant impact with mitigation incorporated. The proposed project is located in the San Francisco Bay Area Air Basin (Air Basin), where air quality is regulated by the BAAQMD. The United States Environmental Protection Agency (EPA) and the California Environmental Protection Agency (Cal/EPA) are responsible for identifying nonattainment and attainment areas for each criteria pollutant within the Air Basin as an indicator for whether the region is compliant with the standards of the national and State Clean Air Acts, respectively. If a region is designated as "nonattainment," then it is considered to be in violation of the standards established by the Clean Air Act and its amendments. The Air Basin is designated nonattainment for State standards for 1-hour and 8-hour ozone, 24-hour respirable particulate matter (PM_{10}), annual PM_{10}, and annual fine particulate matter ($PM_{2.5}$).[27]

To address regional air quality standards, the BAAQMD has adopted several air quality policies and plans, the most recent of which is the 2017 Clean Air Plan.[28] The 2017 Clean Air Plan was adopted in April of 2017 and serves as the regional Air Quality Plan (AQP) for the Air Basin for attaining federal Ambient Air Quality Standards (AAQS). The primary goals of the 2017 Clean Air Plan are to protect public health and protect the climate. The 2017 Clean Air Plan acknowledges that the BAAQMD's two stated goals of protection are closely related. As such, the 2017 Clean Air Plan identifies a wide range of control measures intended to decrease both criteria pollutants[29] and greenhouse gas (GHG) emissions.[30] In September 2010, the BAAQMD adopted their final Bay Area 2010 Clean Air Plan, which became the most recent ozone plan for the Air Basin. The 2010 Clean Air Plan identifies how the Air Basin would achieve compliance with the State 1-hour air quality standard for ozone, and how the region would reduce ozone from transporting to other basins downwind wind of the Air Basin. The 2017 Clean Air Plan is the latest update to the BAAQMD's AQP.

The 2017 Clean Air Plan also accounts for projections of population growth provided by Association of Bay Area Governments (ABAG) and vehicle miles traveled provided by the Metropolitan Transportation Commission (MTC) 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 Clean Air Plan if it would result in substantial new regional emissions not foreseen in the air quality planning process.

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[27] Bay Area Air Quality Management District (BAAQMD). 2017. California Environmental Quality Act Air Quality Guidelines. May.

[28] Bay Area Air Quality Management District (BAAQMD). 2017. Final 2017 Clean Air Plan. April 19.

[29] The 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").

[30] 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.

The General Plan designates the northern portion of the project site as High Density Residential and the southern portion of the project site as Boulevard Mixed Use (Exhibit 5). Both the High Density Residential and Boulevard Mixed Use designations allow for multi-family housing with a density range of 16 to 32 dwelling units per acre. The Boulevard Mixed Use designation also specifies a maximum FAR of 2.0.[31] The proposed project would develop 173 multi-family dwelling units on a 5.92-acre lot, which equals an average of 30 units per acre, consistent with the maximum allowable housing density of the existing land use designation. In addition, the proposed project would constitute an overall FAR of 0.98, which is below the maximum allowable FAR of 2.0. As neither the maximum allowable residential density nor the maximum allowable FAR of the existing land use designations are exceeded by the proposed project, it is reasonable to assume that the proposed development is already considered in the 2017 Clean Air Plan's population growth and it would not obstruct the implementation of the applicable AQP.

The BAAQMD does not provide a numerical threshold of significance for project-level consistency with AQPs. Therefore, the following criteria would be used for determining the proposed 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 Clean Air Plan, the applicable AQP to date, are to:

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

As discussed under Impact 2.3(a)(b) and (c), the proposed project would not create a localized violation of State or federal air quality standards, significantly contribute to cumulative nonattainment pollutant violations, or expose sensitive receptors to substantial pollutant concentrations. The proposed project would be required to implement the mitigation measures identified under Impact 2.3(b), specifically Mitigation Measure (MM) AIR-1, to incorporate dust control measures during project construction to be considered to have a less than significant construction fugitive dust impacts and to be consistent with Criterion 1. In addition, as identified under Impact 2.3(c), the proposed project would result in potentially significant cancer risk impacts to nearby sensitive receptors during project construction and would be required to implement MM AIR-2, which would require the use of Tier 4 Final engines that meet or exceed 50 horsepower, to be consistent with Criterion 1. The proposed project is therefore consistent with Criterion 1 after incorporation of identified mitigation.

[31] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Website: https://www.townofwindsor.com/DocumentCenter/View/21498/Final-Town-of-Windsor-2040-General-Plan_2018-06-04. Accessed July 8, 2022.

Criterion 2

The 2017 Clean Air Plan contains 85 control measures aimed at reducing air pollutants and GHGs at the local, regional, and global levels. Along with the traditional stationary source, area source, mobile source, and transportation control measures, the 2017 Clean Air Plan contains a number of 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. The 2017 Clean Air Plan also includes an account of the implementation status of control measures originally identified in the 2010 Clean Air Plan.

Table 4 lists the Clean Air Plan policies relevant to the proposed project and evaluates the proposed project's consistency with the policies. As shown below, the proposed project would be consistent with the applicable measures and would not hinder the implementation of any AQP control measure.

Table 4: Project Consistency with Applicable Clean Air Plan Control Measures

Control Measure	Project Consistency
Stationary Control Measures	
SS29: Asphaltic Concrete	**Consistent.** Paving activities associated with the proposed project would be required to utilize asphalt that does not exceed BAAQMD emission standards.
SS33: Commercial Cooking Equipment	**Consistent.** If any of the proposed retail space utilizes commercial kitchens needing a charbroiler, a catalytic oxidizer system must also be installed pursuant to BAAQMD Rule 6-2.
SS34: Wood Smoke	**Consistent:** In compliance with BAAQMD Rule 6-3 wood burning devices, the proposed project would not install any wood burning devices.
SS36: Particulate Matter from Trackout	**Consistent with Mitigation.** Mud and dirt that may be tracked out onto the nearby public roads during construction activities shall be removed promptly by the contractor based on BAAQMD's requirements. MM AIR-1, identified under Impact 2.3(b), would implement Best Management Practices (BMPs) recommended by BAAQMD for fugitive dust emissions during construction.
SS37: Particulate Matter from Asphalt Operations	**Consistent.** Paving and roofing activities associated with the proposed project would be required to utilize BMPs to minimize the particulate matter created from the transport and application of road and roofing asphalt.
SS38: Fugitive Dust	**Consistent with Mitigation.** Material stockpiling and track out during grading activities, as well as smoke and fumes from paving and roofing asphalt operations, shall utilize BMPs to minimize the creation of fugitive dust, consistent with MM AIR-1.

Control Measure	Project Consistency
Transportation Control Measures	
TR9: Bicycle and Pedestrian Access Facilities	**Consistent.** The proposed project would be consistent with this measure by providing sidewalks and pedestrian infrastructure as well as long- and short-term bicycle parking throughout the project site for future resident, employee, and customer use.
Buildings Control Measures	
BL1: Green Buildings	**Consistent**. The proposed project would comply with the Town's latest adopted energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption. In addition, the proposed project includes a goal of achieving net zero energy and would be LEED™ certified.
BL2: Decarbonize Buildings	**Consistent**. The proposed project would comply with the Town's latest adopted energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption. In addition, the proposed project includes a goal of achieving net zero energy and would be LEED™ certified.
BL4: Urban Heat Island Mitigation	**Consistent**. The proposed project would incorporate landscaping throughout the site. The proposed project would provide landscaping in accordance with Town standards that would serve to reduce the urban heat island effect and would include the planting of shade trees.
Energy Control Measures	
EN2: Decrease Energy Use	**Consistent.** The proposed project would comply with the Town's latest adopted energy efficiency standards. Compliance with these energy efficiency standards would decrease building energy consumption relative to business as usual conditions. In addition, the proposed project includes a goal of achieving net zero energy and would be LEED™ certified.
Natural and Working Lands Control Measures	
NW2: Urban Tree Planting	**Consistent.** The proposed project would incorporate landscaping throughout the site. The proposed project would provide landscaping in accordance with Town standards that would serve to reduce the urban heat island effect and would include the planting of shade trees.
Waste Management Control Measures	
WA3: Green Waste Diversion	**Consistent:** The solid waste provider would provide green waste collection, thereby allowing compostable materials to be diverted from the waste stream.

Control Measure	Project Consistency
WA4: Recycling and Waste Reduction	**Consistent:** The solid waste provider would provide recycling pick up, thereby allowing recoverable materials to be diverted from the waste stream.
Source: Bay Area Air Quality Management District (BAAQMD). 2017. Final 2017 Clean Air Plan. April 19.	

In summary, the proposed project would not conflict with any applicable measures under the 2017 Clean Air Plan after the implementation of MM AIR-1; therefore, the proposed project would be consistent with Criterion 2 after incorporation of mitigation.

Criterion 3

The proposed project would 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 in Table 4 above, the proposed project would incorporate several AQP control measures as project design features. The proposed project is therefore consistent with Criterion 3.

Summary

As addressed above, the proposed project would be consistent with all three criteria after the incorporation of MMs AIR-1 and AIR-2. Thus, the proposed project would not conflict with the 2017 Clean Air Plan. Therefore, impacts associated with conflicting with or obstructing implementation of the 2017 Clean Air Plan would be less than significant with mitigation incorporated.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard?

Less than significant impact with mitigation incorporated. This impact relates to criteria pollutant impacts from project construction and operation. Potential impacts would result in exceedances of State or federal standards for NO_X, particulate matter (PM_{10} and $PM_{2.5}$), or CO. NO_X emissions are of concern because of potential health impacts from exposure to NO_X emissions during both construction and operation and as a precursor in the formation of airborne ozone. PM_{10} and $PM_{2.5}$ are of concern during construction because of the potential to emit exhaust emissions from the operation of off-road construction equipment and fugitive dust during earth-disturbing activities (construction fugitive dust). CO emissions are of concern during project operation because CO hotspots can result from increases in on-road vehicle congestion.

ROG emissions are also important because of their participation in the formation of airborne ozone. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. Construction and operational emissions are discussed separately below.

Construction Emissions

During construction, fugitive dust (PM_{10} and $PM_{2.5}$) would be generated from site grading and other earthmoving activities. The majority of this fugitive dust would remain localized and would be deposited near the project site. However, the potential for impacts from fugitive dust exists unless control measures are implemented to reduce the emissions from this source. Exhaust emissions would also be generated from the operation of the off-road construction equipment, as shown in Table 6.

Construction Fugitive Dust

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 the BAAQMD, then fugitive dust emissions during construction are not considered significant.

As required by MM AIR-1, the proposed project would implement BMPs recommended by the BAAQMD for fugitive dust emissions during construction. Therefore, with incorporation of MM AIR-1, fugitive dust construction impacts would be less than significant.

Construction Air Pollutant Emissions: ROG, NO_X, PM_{10}, and $PM_{2.5}$

Version 2020.4.0 of the California Emissions Estimator Model (CalEEMod) was used to estimate the proposed project's construction emissions. CalEEMod provides a consistent platform for estimating construction and operational emissions from a wide variety of land use projects and is the model recommended by the BAAQMD for estimating project emissions. Estimated construction emissions are compared with the applicable thresholds of significance recommended by the BAAQMD to assess ROG, NO_X, exhaust PM_{10}, and exhaust $PM_{2.5}$ construction emissions to determine impact significance for this criterion.

For the purpose of this analysis, construction of the proposed project was assumed to begin in January 2023 and conclude in December 2024. Construction emissions would likely decrease if the construction schedule moves to later years because of improvements in technology, construction fleet turn-over requirements, increasingly stringent emission control standards, and other regulatory requirements. The preliminary construction schedule is provided in Table 5.

Table 5: Conceptual Construction Schedule

Construction Activity	Conceptual Construction Schedule		Working Days per Week	Total Number of Working Days
	Start Date	End Date		
Site Preparation	01/02/2023	01/13/2023	5	10
Grading	01/16/2023	02/24/2023	5	30
Building Construction	02/27/2023	11/01/2024	5	440
Paving	11/04/2024	11/29/2024	5	20
Architectural Coating	12/02/2024	12/27/2024	5	20
Source: CalEEMod Output, Appendix A.				

Project-specific construction equipment assumptions are not currently known, therefore, CalEEMod default construction equipment assumptions were used in the analysis. CalEEMod default construction equipment and equipment activity is based on detailed construction site surveys conducted by the South Coast Air Quality Management District. The assumptions used to estimate emissions and complete CalEEMod results are provided in Appendix A. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as required by CEQA Guidelines. The applicable BAAQMD thresholds for ROG, NO_X, exhaust PM_{10}, and exhaust $PM_{2.5}$ are based on the average daily rate; therefore, total construction emissions were converted to the average daily rate to compare to the applicable thresholds. Annual construction emissions are summarized by activity, converted to average daily emissions, and compared with the applicable BAAQMD significance thresholds in Table 6.

Table 6: Construction Emissions (Unmitigated)

Construction Activity	Tons per Year			
	ROG	NO_X	PM_{10} (Exhaust)	$PM_{2.5}$ (Exhaust)
2023				
Site Preparation	0.01	0.14	0.01	0.01
Grading	0.03	0.30	0.01	0.01
Building Construction	0.26	1.93	0.08	0.07
Total 2023 Construction Emissions	*0.31*	*2.37*	*0.10*	*0.09*
2024				
Building Construction	0.25	1.81	0.07	0.07
Paving	0.01	0.10	<0.01	<0.01
Architectural Coating	1.53	0.01	<0.01	<0.01
Total 2024 Construction Emissions	*1.79*	*1.92*	*0.08*	*0.07*
Total Construction Emissions (tons)	**2.10**	**4.29**	**0.17**	**0.16**
Total Construction Emissions (lbs)	**4,195**	**8,577**	**347**	**325**
Average Construction Emissions (lbs/day)[1]	8	16	1	1
Significance Threshold (lbs/day)	**54**	**54**	**82**	**54**
Exceeds Significance Threshold?	No	No	No	No

Notes:
lbs = pounds
NO_X = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter
$PM_{2.5}$ = particulate matter 2.5 microns in diameter
ROG = reactive organic gases
[1] Calculated by dividing the total lbs by the total 520 working days of construction for the duration of construction (2023–2024).
Unrounded numbers from the CalEEMod output were used for all calculations.
Source: CalEEMod Output (see Appendix A).

As shown in Table 6, the proposed project's construction emissions from all construction activities would be below the BAAQMD's recommended thresholds of significance for ROGs, NO_X, exhaust PM_{10}, and exhaust $PM_{2.5}$, indicating that the proposed project would not result in a cumulatively considerable net increase in any criteria pollutant or ozone precursor. As previously discussed, the proposed project would be required to implement MM AIR-1 to reduce potential impacts related to fugitive dust emissions from use of the construction equipment. Therefore, project construction would have a less than significant impact after incorporation of mitigation.

Operational Emissions

Operational Air Pollutant Emissions: ROG, NO_X, PM_{10}, and $PM_{2.5}$

Regional pollutants of concern include ROGs, NO_X, PM_{10}, and $PM_{2.5}$. The proposed project's operational emissions for the respective pollutants were calculated using CalEEMod Version 2020.4.0. As the proposed project could become operational as soon as December 2024, project operations were conservatively analyzed assuming full buildout in 2024. Operational emissions for land use development projects are typically distinguished as mobile-, area-, and energy-source emissions. Mobile source emissions are those associated with automobiles that would travel to and from the project site. Area source emissions are those associated with wood and natural gas combustion for fireplaces and hearths, landscape maintenance activities, and periodic reapplication of architectural coatings. Energy-source emissions are those associated with natural gas combustion for space and water heating. The results for the estimated annual and average daily emissions during project operation are presented in Table 7. For detailed assumptions and complete emission estimates, please refer to Appendix A.

Table 7: Operational Emissions (Unmitigated)

Emissions Source	Criteria Pollutants			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area (tons/year)	1.05	0.02	0.01	0.01
Energy (tons/year)	0.01	0.07	0.01	0.01
Mobile (tons/year)	0.60	0.79	0.98	0.27
Annual Emissions Evaluation				
Estimated Annual Emissions (tons/year)	**1.66**	**0.88**	**0.99**	**0.28**
Thresholds of Significance (tons/year)	10	10	15	10
Exceeds Significance Threshold?	**No**	**No**	**No**	**No**
Average Daily Emissions Evaluation				
Estimated Average Daily Emissions (lbs/day)	**8.24**	**4.80**	**5.44**	**1.54**
Thresholds of Significance (lbs/day)	54	54	82	54
Exceeds Significance Threshold?	**No**	**No**	**No**	**No**

Emissions Source	Criteria Pollutants			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Notes: NO_X = oxides of nitrogen PM_{10} = particulate matter less than 10 microns in diameter $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter ROG = reactive organic gases Source: CalEEMod Output (see Appendix A).				

As shown in Table 7, the proposed project would not result in operational air pollutants or precursors that would exceed BAAQMD's recommended thresholds of significance, indicating that ongoing project operations would not result in a cumulatively considerable net increase of any criteria pollutant or ozone precursor. Therefore, operational impacts associated with criteria pollutant emissions would be less than significant.

Operational CO Hotspot

The CO emissions from traffic generated by the proposed project are a concern at the local level. Congested intersections can result in high, localized concentrations of CO.

The BAAQMD recommends a screening analysis to determine whether a project has the potential to contribute to a CO hotspot. The screening criteria identify when site-specific CO dispersion modeling is necessary. Therefore, the proposed project would result in a less than significant impact to air quality for local CO if the following BAAQMD-recommended screening criteria are met:

- The project is consistent with an applicable Congestion Management Program (CMP) established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans; or
- The project-generated traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or

The project-generated 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). According to the Transportation Study (TS) prepared for the project by GHD Consultants (GHD), the proposed project is forecasted to generate 1,221 daily vehicle trips, including 83 trips during the AM peak-hour and 120 trips during the PM peak-hour.[32] As discussed in the TS, the study intersection that would experience the greatest traffic volumes under Cumulative Plus Project conditions would be the intersection of Shiloh Road and the US-101 northbound off-ramp with an estimated 2,995 AM and 3,383 PM peak-hour vehicle trips. It should be noted that the Cumulative Plus Project conditions include AM and PM peak-hour vehicle trips generated by the proposed project. As this intersection would experience peak-hour trips less than 44,000 vehicles per hour—or less than 24,000 vehicles per hour for an intersection that may have nearby features limiting CO pollutant dispersion—the

[32] GHD Consultants. 2022. Shiloh Crossing Project Transportation Study. May.

proposed project would not generate vehicle trips that could result in a CO hotspot. Nonetheless, the proposed project could result in a potentially significant impact related to CO hotspots if it would be in conflict with the local CMP. As discussed under Impact 2.17(a), the proposed project would be consistent with the local CMP. Therefore, based on the above criteria, the proposed project would not exceed the CO screening criteria and would have a less than significant impact related to CO.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact with mitigation incorporated. A sensitive receptor is defined by the BAAQMD as the following: "Facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and residential areas." The closest sensitive receptors to the project site are single-family residences as close as 15 feet east of the project site, Esposti Park approximately 1,000 feet east of the project site, and single-family residences as close as 420 feet north of the project site. The project site is also generally surrounded by commercial land uses to the north, residences to the east, open agricultural land to the south, and retail land uses to the west.

The following four criteria were applied to determine the significance of project emissions to sensitive receptors. The proposed project is considered to have a potentially significant impact if:

- **Criterion 1:** Construction of the project would result in an exceedance of the health risk significance thresholds.
- **Criterion 2:** The cumulative health impact would result in an exceedance of the cumulative health risk significance thresholds.
- **Criterion 3**: Operation of the project would result in an exceedance of the health risk significance thresholds.
- **Criterion 4:** A CO hotspot assessment must demonstrate that the project would result in the development of a CO hotspot that would cause an exceedance of the CO AAQS.

Criterion 1: Project Construction Toxic Air Pollutants

An assessment was made of the potential health impacts to surrounding sensitive receptors resulting from the emissions of TACs during construction. A summary of the assessment is provided below, while the detailed assessment is provided in Appendix A of this IS/MND.

DPM has been identified by the ARB as a carcinogenic substance and is identified herein as the TAC of concern during project construction due to the anticipated construction activity and use of diesel fueled equipment. Major sources of DPM include off-road construction equipment and heavy-duty delivery truck and worker activities. For purposes of this analysis, DPM is represented as exhaust emissions of $PM_{2.5}$.

Estimation of Construction DPM Emissions

Construction DPM emissions (represented as $PM_{2.5}$ exhaust) were estimated using CalEEMod, as described under the discussion for Impact 2.3(b). Construction was assumed to occur in a single phase

and last for approximately 24 months. The construction DPM emissions were assumed to be distributed over the project area with a working schedule of 8 hours per day and 5 days per week. As discussed below, the project construction could adversely affect nearby sensitive receptors, thereby requiring implementation of MM AIR-2 to reduce impacts to less than significant. As illustrated in Table 10, unmitigated project construction could result in as great as 60 cancer cases per one million people as a result of DPM emissions generated during project construction. As such MM AIR-2 would require the proposed project to utilize construction equipment and engines meeting Tier 4 Final emission standards. Both unmitigated and mitigated construction DPM emissions are shown in Table 8.

Table 8: Project DPM Construction Emissions

Annual Construction Emissions	On-site DPM ($PM_{2.5}$ Exhaust) (tons/year)	Off-site DPM[1] ($PM_{2.5}$ Exhaust) (tons/year)	Total DPM ($PM_{2.5}$ Exhaust) (tons/year)
Annual Construction Emissions—Unmitigated			
Unmitigated Construction	0.15734	0.00523	0.16257
Mitigated Construction	0.02104	0.00523	0.02627

Notes:
DPM = diesel particulate matter
PM_{10} = particulate matter less than 10 microns in diameter
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter[1] Off-site DPM emissions shown above do not incorporate the proportion reduction utilized to model off-site emissions generated within the BAAQMD-recommended 1,000-foot radius of the project site.
Source: Appendix A

Estimation of Cancer Risks

The BAAQMD has developed a set of guidelines for estimating cancer risks that provide adjustment factors that emphasize the increased sensitivities and susceptibility of young children to exposures to TAC.[33,34] These adjustment factors include age sensitivity weighting factors, age-specific daily breathing rates, and age-specific time-at-home factors. As shown in the American Meteorological Society/EPA Regulatory Model (AERMOD) output files, the Maximally Impacted Sensitive Receptor (MIR) would be at a single-family residence immediately adjacent to the project site to the east. The following equations are drawn from the California Office of Environmental Health Hazard Assessment (OEHHA) HRA guidelines and were adjusted with values identified for adjustment in the BAAQMD guidelines.

$$\text{Cancer Risk} = \text{CPF} \times \text{DOSE}_{\text{AIR}} \times \text{ASP} \times \text{ED/AT} \times \text{FAH} \qquad \text{(EQ-1)}$$

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

[33] Bay Area Air Quality Management District (BAAQMD). 2016. BAAQMD Air Toxics NSR Program Health Risk Assessment Guidelines. December.
[34] Bay Area Air Quality Management District (BAAQMD). 2020. BAAQMD Health Risk Assessment Modeling Protocol. December.

background cancer risk to the population; cancer risk is expressed in terms of risk per million exposed individuals.

CPF = Inhalation Cancer Potency Factor (1.1)

ASP = Age Sensitivity Factor (see Table 9)

ED = Exposure Duration (duration of construction activity)

AT = Averaging Time for lifetime cancer risk (70 years expressed in days)

FAH = Fraction of Time at Home (see Table 9)

$$DOSE_{AIR} = C_{AIR} \times DBR \times A \times EF \qquad \text{(EQ-2)}$$

Where:

C_{AIR} = TAC concentration from air dispersion model ($\mu g/m^3$)

DBR = Daily Breathing Rate (see Table 9)

A = Inhalation Absorption factor (1)

EF = Exposure Frequency (see Table 9)

The BAAQMD- and OEHHB-recommended values for the various cancer risk parameters, shown in EQ-1 and EQ-2, are provided in Table 9.

Table 9: Exposure Assumptions for Cancer Risk Calculations

Receptor Type	Duration During Construction (Years)	Fraction of Time at Home (FAH)	Exposure Frequency (EF) (Days/Year)	Age Sensitivity Factors (ASF)	Daily Breathing Rate (DBR) (L/kg-day)
Residences[1]					
Infant Receptors					
Third Trimester	0.25	1	350	10	361
0 to 2 years	0.75	1	350	10	1,090
Child Receptors					
2 to 9 years	1	1	350	3	631
9 to 16 years	1	1	350	3	572
Adult Receptors					
16 to 30 years	1	0.73	350	1	261
30 to 70 years	1	0.73	350	1	233
Parks[2]					
Infant Receptors					
Third Trimester	0.25	1	250	10	361
0 to 2 years	0.75	1	250	10	1,090

Receptor Type	Duration During Construction (Years)	Fraction of Time at Home (FAH)	Exposure Frequency (EF) (Days/Year)	Age Sensitivity Factors (ASF)	Daily Breathing Rate (DBR) (L/kg-day)
Child Receptors					
2 to 9 years	1	1	250	3	861
9 to 16 years	1	1	250	3	745
Adult Receptors					
16 to 30 years	1	1	250	1	335
30 to 70 years	1	1	250	1	290

Notes:
L/kg-day = liters per kilogram body weight per day.
[1] The daily breathing rates recommended by the BAAQMD for residential receptors assume the 95th percentile breathing rates for all individuals less than 2 years of age and 80th percentile breathing rates for all older individuals. BAAQMD assumes residential receptors exposure occurs 24 hours per day for 350 days per year. BAAQMD further recommends applying the above FAH values to reflect the expected time the receptor spends at the residence.
[2] All park receptors utilize the 95th percentile daily breathing rates for their respective age groups.
Sources:
Bay Area Air Quality Management District (BAAQMD). 2016. BAAQMD Air Toxics New Source Review (NSR) Program Health Risk Assessment Guidelines. December.
Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines. February.

Estimation of Non-Cancer Chronic Hazards

TACs can also cause chronic (long-term) effects related to non-cancer illnesses such as reproductive effects or birth defects, or adverse environmental effects. Non-cancer health risks are conveyed in terms of the hazard index (HI), a ratio of the predicted concentration of the facility's reported TAC emissions to a concentration considered acceptable to public health professionals. A significant risk is defined as an HI of 1 or greater. An HI of less than 1 indicates that no significant health risks are expected from the facility's TAC emissions. The relationship for the non-cancer hazards of TACs is given by the following equation:

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

Where:

HI = Hazard Index: an expression of the potential for chronic non-cancer health risks
C_{ann} = Annual average TAC concentration ($\mu g/m^3$)
REL = Reference Exposure Level: the DPM concentration at which no adverse health effects are anticipated

Annual concentrations of DPM as predicted by the air dispersion model are used to estimate chronic non-cancer hazards. The OEHHA has defined a Reference Exposure Level (REL) for DPM of 5 micrograms per cubic meter ($\mu g/m^3$).

Estimation of Health Risks and Hazards from Project Construction

To assess impacts to off-site sensitive receptors, receptor locations within the AERMOD were placed at locations of existing residences and parks located in the vicinity of the project boundary. As previously discussed, project construction is anticipated to start in January 2023 and conclude in December 2024. The following AERMOD modeling parameters were utilized to identify the DPM concentration at identified receptors.

1. Sensitive receptors (e.g., schools, daycare facilities, hospitals, care facilities, residences) in the immediate project vicinity are represented in the model with discrete Cartesian receptors at a flagpole height of 1.5 meters. For parks, a boundary of discrete receptors was placed around the perimeter of that land use to identify potential impacts at the closest point to the project site. The closest sensitive receptors to the project site represented in the air dispersion modeling include the following:
   - Single-family residences as close as 15 feet east of the project site.
   - Single-family residences as close as 420 feet north of the project site.
   - Esposti Park as close as 1,000 feet east of the project site.
2. A nested Cartesian grid was placed in AERMOD with the following spacing parameters:
   - 20 meters spacing within the project site and up to 200 meters from the project site.
   - 50 meters spacing between 200 meters and 500 meters from the project site.
   - 100 meters spacing between 500 meters and 1,000 meters from the project site.
   - 200 meters spacing between 1,000 and 2,000 meters from the project site.
3. AERMOD's non-default regulatory dispersion option was selected. Among the dispersion control options available, the Fast All Sources option was selected.
4. The Urban dispersion coefficient was selected as greater than 50 percent of the surrounding three kilometers is developed.
5. Emissions were characterized in the model using various area and volume sources to represent different activities. The following describes the emission sources utilized in the model for each model scenario.
   - On-site construction activities are represented with one polygon area source across the entire project site.
   - Off-site construction hauling and vendor truck operation for project construction is represented with line volume sources along Hembree Lane and Shiloh Road.

   Off-site emissions were adjusted to account for off-site emissions that would occur within 1,000 feet of the project site (see Off-Site $PM_{2.5}$ Exhaust Adjustment Sheet in Appendix A).
6. Meteorological data from the Sonoma County Airport Air Monitoring Station was used for lower atmospheric meteorological data. This station was selected as it is the closest monitoring station to the project site, and it resembles physical site characteristics and elevation generally representative of the project site. The Oakland Airport Air Monitoring Station provides preprocessed meteorological data for upper atmospheric conditions in the region. Both monitoring stations cover the years 2009-2014. The model used all years of available meteorological data.

The MIR during project construction was found at a residence 15 feet east of the project site. Table 10 presents a summary of the proposed project's construction cancer risk, chronic non-cancer hazard, and annual $PM_{2.5}$ concentration impacts at the residential MIR. For informational purposes, Table 10 presents risks and hazards associated with the park MIR. As discussed in Impact 2.3(b), MM AIR-1 would be required to reduce fugitive dust emissions during construction, which was incorporated into the unmitigated air dispersion modeling. It should be noted, however, that inclusion of MM AIR-1 only reduces $PM_{2.5}$ fugitive dust and not $PM_{2.5}$ exhaust.

Table 10: Estimated Health Risks and Hazards During Project Construction—Unmitigated

Impact Scenario	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[3]	Annual $PM_{2.5}$ Concentration (mg/m^3)
Residential MIR[1]	60.25	0.04	0.20
Park MIR[2]	1.94	<0.01	0.01
BAAQMD Thresholds of Significance	**10**	**1**	**0.3**
Exceeds Individual Source Threshold?	**Yes**	**No**	**No**

Notes:
$\mu g/m^3$ = micrograms per cubic meter
DPM = diesel particulate matter
MIR = Maximally Impacted Sensitive Receptor
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
REL = Reference Exposure Level
[1] The Residential MIR represents a residence 15 feet east of the project site.
[2] The Park MIR represents the Esposti Park, approximately 1,000 feet east of the project site.
[3] Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as $PM_{2.5}$ exhaust) by the REL of 5 $\mu g/m^3$.
Source: Appendix A.

As illustrated in Table 10, unmitigated project construction could result in as great as 60 cancer cases per one million people at the residential MIR, the greatest impacted MIR across all nearby sensitive receptors, as a result of DPM emissions generated during project construction. As such MM AIR-2 would require the proposed project to utilize construction equipment and engines meeting Tier 4 Final emission standards for all equipment rated at 50 horsepower or greater. Table 11 below illustrates the cancer risk, chronic non-cancer hazard, and annual $PM_{2.5}$ concentration at the residential and park MIRs resulting from project construction with incorporation of MM AIR-2.

Table 11: Estimated Health Risks and Hazards During Project Construction—Mitigated

Impact Scenario	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[3]	Annual $PM_{2.5}$ Concentration (mg/m^3)
Residential MIR[1]	8.09	0.01	0.03
Park MIR[2]	0.26	<0.01	<0.01

Impact Scenario	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[3]	Annual $PM_{2.5}$ Concentration (mg/m^3)
BAAQMD Thresholds of Significance	**10**	**1**	**0.3**
Exceeds Individual Source Threshold?	**No**	**No**	**No**

Notes:
$\mu g/m^3$ = micrograms per cubic meter
DPM = diesel particulate matter
MIR = Maximally Impacted Sensitive Receptor
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
REL = Reference Exposure Level
[1] The Residential MIR represents a residence 15 feet east of the project site.
[2] The Park MIR represents the Esposti Park, approximately 1,000 feet east of the project site.
[3]Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as $PM_{2.5}$ exhaust) by the REL of 5 $\mu g/m^3$.
Source: Appendix A.

As shown in Table 10, incorporation of MM AIR-2 would reduce DPM emissions generated during project construction to a level that would result in less than significant impacts to nearby sensitive receptors. As shown therein, incorporate of MM AIR-2 would reduce potential cancer risk impacts experienced at the residential MIR from as great as 60 cancer cases per one million people to eight cancer cases per one million people. As such, this impact would be less than significant with incorporation of MM AIR-2.

Criterion 2: Cumulative Health Risk Assessment

The BAAQMD recommends assessing the potential cumulative impacts from sources of TACs within 1,000 feet of a project site. For a project-level analysis, BAAQMD provides several tools for use in screening potential sources of TACs. The BAAQMD-provided tools used to assess the potential cumulative impacts from TACs are described below:

- **Health Risks for Local Roadways.** The BAAQMD pre-calculated concentrations and the associated potential cancer risks and $PM_{2.5}$ concentration increases for each county within their jurisdiction for roadways that carry at least 30,000 average daily trips. For Community Air Risk Evaluation (CARE) Program areas, the BAAQMD also includes local roadways that meet BAAQMD's "major roadway" criteria of 10,000 vehicles or 1,000 trucks per day. The latest available screening tool is in the form of a Geographic Information System (GIS) raster file. As the proposed project is not located in a CARE area,[35] the BAAQMD-screening tool does not include local roadways that meet BAAQMD's "major roadway" criteria for the project area. Therefore, traffic volumes were retrieved for roadways within 1,000 feet of the project site experiencing between 10,000 and 30,000 daily vehicle trips and calculated for their associated health risks. As shown in the TIS prepared for the proposed project, Shiloh Road currently experiences as much as

[35] Bay Area Air Quality Management District (BAAQMD). 2014. Community Air Risk Evaluation Program. Website: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program. Accessed June 7, 2022.

2,662 peak-hour vehicles. As an industry standard, this was multiplied by 10 to identify an estimated average daily vehicle count of 26,620. Health impacts from vehicle traffic along Shiloh Road using this information are shown in Table 12, and the BAAQMD calculation tool used to quantify associated impacts are contained in Appendix A.

- **Freeway Screening Analysis Tool**. The BAAQMD prepared a GIS tool that contains pre-estimated cancer risk and $PM_{2.5}$ concentration increases for highways within the Bay Area. The nearest freeways to the proposed project include US-101, approximately 1,200 feet west of the project site.
- **Stationary Source Risk and Hazard Screening Tools**. The BAAQMD prepared a GIS tool with the location of permitted sources and provides a health risk calculator that estimates and refines screen-level cancer risk, a non-cancer health hazard index, and $PM_{2.5}$ concentrations using emissions data from BAAQMD's permitting database.[36] For each emissions source, the BAAQMD provides conservative estimates of cancer risk and $PM_{2.5}$ concentrations. Based on information from the GIS tool, 2 BAAQMD-permitted stationary sources exist within the vicinity of 1,000 feet of the project site.
- **Rail Screening Tools**. The BAAQMD prepared GIS tools that contain estimated cancer risks and $PM_{2.5}$ concentrations from railroad operations at any point within the Air Basin. The closest existing railway is located approximately 2,950 feet southwest of the project site.

Cumulative Health Risk Assessment at the Maximum Impacted Sensitive Receptor

A cumulative Health Risk Assessment (HRA) was performed that examined the cumulative impacts of the proposed project's construction emissions and sources of TAC emissions within 1,000 feet of the project site.

The cumulative health risk results, including health risks from the existing stationary source, during project construction with incorporation of MM AIR-2 are summarized in Table 12. Cumulative health risk results shown therein are representative of the health risks to the MIR that would experience the highest concentration of pollutants, which represents the off-site residential MIR as it would experience a greater potential impact on human health than any other previously identified MIR.

Table 12: Summary of the Cumulative Health Impacts at the MIR during Construction

Source/Impact Scenario	Source Type	Distance from MIR[1] (feet)	Cancer Risk (per million)	Chronic HI	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Project MIR					
Project Construction	Diesel Construction Equipment	–	8.09	0.01	0.03
Existing Stationary Sources (BAAQMD Facility Number)[2]					
The Home Depot #6667 (ID 13223)	Generators	500	0.01	ND	<0.01

[36] Bay Area Air Quality Management District (BAAQMD). Permitted Stationary Sources Risk and Hazards. Permitted Stationary Sources Risk and Hazards. Website: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65. Accessed June 7, 2022.

Source/Impact Scenario	Source Type	Distance from MIR[1] (feet)	Cancer Risk (per million)	Chronic HI	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Hembree Shell (ID 112297)	Gas Dispensing Facility	700	1.26	0.01	ND
Roadways					
Existing Local Roadway Network		–	ND	ND	ND
Shiloh Road		10	31.71	ND	0.62
Rail					
Existing Rail Lines		2,950	0.40	ND	<0.01
Freeways					
Existing Freeways		1,200	10.68	ND	0.17
Cumulative Health Risks					
Cumulative Maximum with Project DPM Emissions			**52.15**	**0.02**	**0.82**
BAAQMD's Cumulative Thresholds of Significance			**100**	**10**	**0.8**
Exceeds Significance Threshold?			**No**	**No**	**Yes**

Notes:
$\mu g/m^3$ = micrograms per cubic meter
BAAQMD = Bay Area Air Quality Management District
DPM = diesel particulate matter
HI = Hazard Index
MIR = Maximally Impacted Sensitive Receptor
ND = no data available
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
[1] The MIR above represents the greatest impacted MIR, which is the residence immediately adjacent to the east of the project site.
[2] Assumes emissions remain constant with time.
Source: Appendix A.

As noted in Table 12, the cumulative impacts from the project construction and existing sources of TACs would be less than the BAAQMD's cumulative thresholds of significance for cancer cases per one million people with incorporation of MM AIR-2. However, construction of the proposed project would result in a cumulative $PM_{2.5}$ concentration at the MIR with 0.82 microns per cubic meter ($\mu g/m^3$) when the BAAQMD's recommended significance threshold is 0.8 $\mu g/m^3$. It should be noted that the background concentration of $PM_{2.5}$ at the MIR of 0.79 $\mu g/m^3$ presents a situation where any project or activity resulting a cumulative increase in $PM_{2.5}$ concentration of greater than 0.01 $\mu g/m^3$ would result in an exceedance of the BAAQMD's recommended significance threshold. As such, the proposed project's contribution to cumulative $PM_{2.5}$ of 0.03 $\mu g/m^3$ is not considered to be cumulatively considerable because the proposed project would not exceed the project-specific significance thresholds during construction as illustrated in Table 11. Therefore, the proposed project would not result in exposing sensitive receptors to substantial concentrations of pollutant or constitute a potentially significant impact. Thus, the cumulative health risk impacts from project construction would be less than significant with incorporation of MM AIR-2.

Criterion 3: Operational Project Emissions

The proposed project would consist of 173 apartment dwellings, a Community Center, and 8,000 square feet of commercial space in two buildings on a 5.92-acre site. As previously discussed under Impact 2.3(b), the proposed project would not result in a potential CO hotspot. As described in the TIS prepared for the proposed project, an estimated 1,221 daily vehicle trips would be generated by the proposed project.[37] While the proposed project would be a mixed-use development including 8,000 square feet of commercial space, as a principally residential development, it is anticipated that the proposed project would not generate substantial heavy-duty vehicle trips.

Because the proposed project would generate 1,221 daily vehicle trips, principally consisting of passenger vehicles, and nearly all passenger vehicles are gasoline-fueled, the proposed project would not generate a significant amount of DPM emissions during operation; however, gasoline-fueled vehicles would still emit relatively small amounts of gasoline TACs such as benzene, isopentane, and toluene during project operation. Nonetheless, the potential cancer risks associated with non-diesel TACs emitted from gasoline vehicles in the San Francisco Bay Air Basin are substantially less than the potential cancer risks associated with DPM emissions and are therefore not included in this analysis.[38] Furthermore, these emissions would be dispersed throughout the local roadway network and would not solely be generated at the project site. Therefore, the proposed project would not result in significant health impacts to nearby sensitive receptors during operation.

Criterion 4: Carbon Monoxide Hotspot Assessment

As discussed in Impact 2.3(b), the proposed project would not generate sufficient vehicle traffic volumes during project operation to substantiate creating a CO hotspot. Therefore, this impact would be less than significant with respect to exposing sensitive receptors to substantial concentrations of CO emissions. As such, the proposed project would result in less than significant impacts related to exposing sensitive receptors to substantial pollutant concentrations.

d) Result in other emission (such as those leading to odors) adversely 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. The ability to detect odors varies considerably among the populations and is subjective. The BAAQMD does not have a recommended odor threshold for construction activities. However, the BAAQMD recommends operational screening criteria that are based on the distance between receptors and types of sources known to generate odors. For projects within the screening distances, the BAAQMD has the following threshold for project operations:

[37] GHD Consultants. 2022. Shiloh Crossing Project Transportation Study. May.
[38] California Air Resources Board (ARB). 2008. Health Risk Assessment for the Union Pacific Railroad Oakland Railyard.

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

Two circumstances have the potential to cause odor impacts:

1. A source of odors is proposed to be located near existing or planned sensitive receptors, or
2. A sensitive receptor land use is proposed near an existing or planned source of odor.

Projects that would site an odor source or a receptor farther than the applicable screening distance, shown in Table 13 below, would not likely result in a significant odor impact.

Table 13: Odor Screening Distances

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Source: Bay Area Air Quality Management District (BAAQMD). 2017. California Environmental Quality Act Air Quality Guidelines. May.	

Project Construction

Diesel exhaust and ROGs would be emitted during construction of the proposed 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. Therefore, the proposed project would not

result in any peculiar effects and would not result in new or more severe impacts related to odors during project construction.

Project Operation

Proposed Project as an Odor Generator

Land uses typically associated with odors include wastewater treatment facilities, waste disposal facilities, agricultural operations, or other operations listed in Table 13. The proposed project would involve the development of residences whose operations could lead to odors from associated laundry cleaning, vehicle exhaust, outdoor cooking, and waste disposal. However, such odors generated by project operation would be small in quantity and duration and would not pose an objectionable odor impact to future and existing receptors.

Proposed Project as a Receptor

Using Google Maps, two waste transfer/collection facilities, two home improvement stores, one chemical laboratory, one fiberglass manufacturer, two auto body shops, three coffee shops, two food processing companies were identified within the screening distance as provided in Table 13. Public records retrieved from the BAAQMD show that two unconfirmed odor complaints were filed for one sanitation company in August and September of 2019 by the time at which this analysis was prepared. This business provides recycle bins and portable restrooms and is located at 590 Caletti Avenue, Windsor, CA 95492, which is approximately 0.5 mile southwest of the project site. However, the number of complaints did not exceed the BAAQMD threshold and no more odor complaints were filed recently. Therefore, the proposed project would not be subjected to significant odor impacts from nearby sources.

Mitigation Measures

MM AIR-1 During construction activities, the following air pollution control measures shall be implemented:

- Exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, and sidewalks shall be paved as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxic Control Measure [ATCM] Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and person to contact at the Town regarding dust complaints. This person shall respond and take corrective action within 48 hours of a complaint or issue notification. The Bay Area Air Quality Management District (BAAQMD) phone number shall also be visible to ensure compliance with applicable regulations.

MM AIR-2 During construction activities, all off-road equipment with engines greater than 50 horsepower shall meet either the United States Environmental Protection Agency (EPA) or California Air Resources Board (ARB) Tier IV Final off-road emission standards. The construction contractor shall maintain records concerning its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information may include but are not limited to equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number.

If engines that comply with Tier IV Final off-road emission standards are not commercially available, then the construction contractor shall use the next cleanest piece of off-road equipment (e.g., Tier III) available. For purposes of this mitigation measure, "commercially available" shall mean the availability of Tier IV Final engines taking into consideration factors such as critical-path timing of construction and geographic proximity to the project site of equipment. The contractor can maintain records for equipment that is not commercially available by providing letters from at least two rental companies for each piece of off-road equipment where the Tier IV Final engine is not available.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.4 Biological Resources *Would the project:*				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or United States Fish and Wildlife Service?	☐	☒	☐	☐
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 Wildlife or United States Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Environmental Evaluation

Setting

This section evaluates potential effects on biological resources that may result from project implementation. The analysis is based on the following references materials provided in Appendix B:

- Results from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California database searches.

- Biological Assessment (BA) and Wetland Determination (WD) prepared on March 18, 2021, by Bole & Associates (2021 BA and WD).
- Spring Botanical Survey Memo prepared on March 18, 2022, by Bole & Associates (2022 Spring Botanical Survey Memo).
- Biological Resources Assessment (BRA) and WD prepared on May 3, 2022, by Bole & Associates 2022 (2022 BRA and WD).
- California Tiger Salamander Analysis prepared on July 13, 2022, by Wildlife Research Associates (2022 CTSA).
- Botanical Assessment prepared on July 13, 2022, by Jane Valerius Environmental Consulting (2022 Botanical Assessment).
- Email correspondence from Gil Falcone of the North Coast Regional Water Quality Control Board on July 5, 2022 (2022 North Coast Regional Water Quality Control Board (RWQCB)).
- United States Fish and Wildlife Services (USFWS) Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed Plants on the Santa Rosa Plain.
- 2007 USFWS Programmatic Biological Opinion (Programmatic) for United States Army Corps of Engineers (USACE) Permitted Projects that Affect the California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California.

Would the project:

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

Less than significant with mitigation incorporated. For the purpose of this analysis, special-status species refers to all species formally listed as threatened and/or endangered under the following:

- Federal Endangered Species Act or the California Endangered Species Act (CESA);
- California Species of Special Concern, designated as Fully Protected by the CDFW and given a CNPS rank[39] or designated as special-status by city, county, or other reginal planning documents:
  - **Rank 1A**: Plants presumed extirpated in California and either rare or extinct elsewhere.
  - **Rank 1B**: Plants rare, threatened, or endangered in California and elsewhere.
  - **Rank 2A**: Plants presumed extirpated in California but common elsewhere.
  - **Rank 2B:** Plants rare, threatened, or endangered in California but more common elsewhere.
  - **Rank 3**: Plants about which more information is needed.
  - **Rank 4**: Watch List: Plants of limited distribution.

[39] All plants appearing on the CNPS List 1 or 2 are considered to meet the CEQA Guidelines Section 15830 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, the CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA.

Federal and State listed threatened and/or endangered species are legally protected under the Endangered Species Act and CESA. The designated special-status species listed by the CNPS have no direct legal protection but require an analysis of significance of potential impacts under CEQA Guidelines. Special-status plant and wildlife species typically occur in undeveloped areas. Although it is less likely, it is also possible for them to occur within developed areas.

Analysis for this checklist question is based on results from the Bole & Associates biological studies (2021 BA and WD; 2022 Spring Botanical Survey Memo; 2022 BRA and WD)); California Tiger Salamander Analysis from Wildlife Research Associates (2022 CTSA); and Botanical Assessment from Jane Valerius Environmental Consulting (2022 Botanical Assessment).[40,41,42,43,44] Three site visits were conducted by BA between 2021 and 2022, March 17, 2021; March 10, 2022; and April 26, 2022. One field survey was conducted in tandem by Wildlife Research Associates and Jane Valerius Environmental Consulting on July 12, 2022.

The Bole & Associates biological studies describe the 5.92-acre project site as situated at an elevation of approximately 125 feet above mean seal level and bordered on the south by Shiloh Road, on the east by Business Park Court Street and residential properties, on the north by Business Park Court and Industrial Park businesses, and on the west by Home Depot. Historically the project site contained several warehouse buildings as part of an agricultural trucking facility. All buildings were demolished in 2006 and the project site has remained vacant.

According to the Bole & Associates biological studies, there are two landcover types present on the 5.92-acre project site (see Figure 5 of the 2022 BRA & WD): 5.87 acres of non-native annual grassland, and the remaining 0.05 acre contains a fenced stormwater detention basin. Dominant perennial vegetation observed within the non-native annual grassland area included disturbed non-native grasses and forbs. Species observed included wild oats (*Avena fatua)*, yellow star-thistle (*Centaurea solstitialis*), filaree (*Erodium cicutarium)*, field bindweed (*Convolvulus arvensis*), fiddle dock (*Rumex pulcher)*, medusahead (*Taeniatherum caput-medusae),* Mediterranean barley (*Hordeum marinum)*, radish (*Raphanus sativus)*, Italian ryegrass (*Lolium multiflorum)*, and trefoil (*Lotus corniculatus)*. Vegetation observed within the stormwater detention basin included three small diameter willow (*Salix sp.)* and one small diameter cottonwood (*Populus sp.*). Additional plant observations are included in Enclosure D of the 2022 BRA and WD.[45] Furthermore, the 2022 Botanical Assessment found the stormwater detention basin supports a wetland plant community consisting of perennial emergent marsh type vegetation dominated by cattails (*Typha latifolia*), soft rush (*Juncus effusus*), spikerush (*Eleocharis macrostachya*), tall flat sedge (*Cyperus* sp.), mannagrass

[40] Bole & Associates. 2021. Biological Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[41] Bole & Associates. 2022. Spring 2022 Update: Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[42] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California
[43] Wildlife Research Associates. 2022. California Tiger Salamander Analysis. 295 Shiloh Road, Windsor, Sonoma County.
[44] Jane Valerius Environmental Consulting. 2022. Shiloh Crossing Project. 295 Shiloh Road, Windsor, CA.
[45] Ibid.

(*Glyceria* sp.), pennyroyal (*Mentha pulegium*), Bermuda grass (*Cynodon dactylon*) and Himalayan blackberry (*Rubus armeniacus*).[46]

Wildlife observed within the project site during field surveys included house finch (*Carpodacus mexicanus*), black phoebe (*Sayornis nigricans*), American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), and raccoon (*Procyon lotor*). Evidence of Botta's pocket gopher *(Thomomys bottae*) was also observed during the July 12, 2022, field survey conducted for the 2022 CTSA.

Special-status Species

Based on an analysis of Santa Rosa Plain Conservation Strategy (Strategy) covered species, literature review, 9-Quad CNDDB occurrences, USFWS listed species, Bole & Associates professional expertise, and observations by Bole & Associates in the field, a list of 16 special-status plant and six animal species that have the potential to occur within the project site was generated. Each of these species' potential to occur on the project site is provided in Table 14 and discussed in further detail below.

Table 14: Evaluation of Listed and Proposed Species Potentially Occurring or Known to Occur on the Project Site

Species	Federal (USFWS) Status	State (CDFW/CNPS) Status	Habitat	Potential to Occur
Plants				
Astragalus claranus Clara Hunt's milk-vetch	E	T/1B.1	Cismontane woodland, valley and foothill grassland, chaparral. Open grassy hillsides especially on exposed shoulders in thin, volcanic or serpentine clay soils moist in spring. 95-333 M.	**Absent**: There is no suitable habitat. None observed during protocol level surveys.
Blennosperma bakeri Sonoma sunshine	E	E/1B.1	Valley and foothill grassland, vernal pools and swales 10-290 M.	**Absent**: Numerous occurrences within 10 miles of Study area; however, the non-native grasslands and stormwater detention basin do not support this species. None observed during protocol level surveys. Alton Lane Conservation Bank used as reference site.
Centromadia parryi ssp. parryi Papoose tarplant	None	None/1B.2	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, vernally mesic, often alkaline sites.	**Absent**: There is no suitable habitat on-site. None observed during protocol level surveys.

[46] Jane Valerius Environmental Consulting. 2022. Shiloh Crossing Project. 295 Shiloh Road, Winsor, CA

Species	Federal (USFWS) Status	State (CDFW/CNPS) Status	Habitat	Potential to Occur
Chorizanthe valida Sonoma spineflower	E	E/1B.1	Coastal prairies in sandy soils.	**Absent**: There is no suitable habitat on-site. None observed during protocol level surveys.
Clarkia imbricata Vine Hill clarkia	E	E/1B.1	Chaparral, valley and foothill grassland on acidic, sandy soil.	**Absent**: There is no suitable habitat on-site. None observed during protocol level surveys.
Cordylanthus tenuisssp. Capillaris Pennell's bird's-beak	E	Rare/1B.2	Closed-cone coniferous forest, chaparral, in open or disturbed areas on serpentine within forest or chaparral.	**Absent**: There is no suitable habitat on-site. None observed during protocol level surveys.
Delphinium bakeri Baker's larkspur	E	Rare/1B.2	Broad leafed upland forest, coastal scrub, valley and foothill grassland. Only site occurs on NW-facing slope, on decomposed shale.	**Absent**: There is no suitable habitat on-site. None observed during protocol level surveys.
Delphinium luteum golden larkspur	E	Rare/1B.1	Chaparral, coastal prairie, coastal scrub; north-facing rocky slopes.	**Absent:** There is no suitable habitat on-site. None observed during protocol level surveys.
Hemizonia congesta ssp. congesta Congested-headed hayfield tarplant	None	None/1B.2	Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 20-560.	**Absent:** Numerous occurrences within 10 miles of project site; however, the non-native grasslands do not support this species. None found during protocol level surveys.
Lasthenia burkei Burke's goldfields	E	Rare/1B.1	Meadow & seep, vernal pools, wetlands; most often in vernal pools and swales.	**Absent:** Numerous occurrences within 10 miles of project site; however, the non-native grasslands do not support this species. None found during protocol level surveys.
Lilium pardalinum ssp. pitkinense Pitkin Marsh lily	E	E	Cismontane woodland, meadows and seeps, marshes and swamps; saturated, sandy soils with grasses and shrubs.	**Absent:** There is no suitable habitat on-site. None observed during protocol level surveys.
Limnanthes vinculans Sebastopol meadowfoam	E	E	Meadows and seeps, vernal pools, valley and foothill grassland; swales, wet meadows and marshy areas	**Absent:** Numerous occurrences within 10 miles of Study area; however, the non-native grasslands and

Species	Federal (USFWS) Status	State (CDFW/CNPS) Status	Habitat	Potential to Occur
			in valley oak savanna; on poorly drained soils of clays and sandy loam.	detention basin do not support this species. None observed during protocol level surveys. Alton Lane Conservation Bank used as reference site.
Navarretia leucocephala ssp. bakeri Baker's navarretia	None	None/1B.1	Vernal pools, cismontane woodland, meadows and seeps.	**Absent:** Numerous occurrences within 10 miles of Study area; however, the non-native grasslands and detention basin do not support this species. None observed during protocol level surveys. Alton Lane Conservation Bank used as reference site.
Navarretia leucocephala ssp. plieantha Many-flowered navarretia	E	E/1B.2	Vernal pools, volcanic ash flow vernal pools. 30-915 M.	**Absent:** There is no suitable habitat on-site. None observed during protocol level surveys.
Sidalcea oregana ssp. hydrophila Marsh checkerbloom	None	None/1B.2	Meadows and seeps, riparian forest, wet soil of stream banks.	**Absent:** There is no suitable habitat on-site. None observed during protocol level surveys.
Sidalcea oregana ssp. valida Kenwood Marsh checkerbloom	E	E/1B.1	Marshes and swamps. Edges of freshwater marshes 115-125 M.	**Absent:** There is no suitable habitat on-site. None observed during protocol level surveys.
Birds				
Strix occidentalis caurina Northern spotted owl	Delisted	E	Ocean shore, lake margins and rivers for both nesting and wintering, most nests within 1 mile of water.	**Absent:** There is no suitable habitat on-site. None observed during on-site surveys.
Athene cunicularia burrowing owl	None	SC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	**Potential:** Although no listed occurrences within 9-quad search, the species may utilize the on-site grasslands on an opportunistic basis. Pre-construction surveys shall be required.

Species	Federal (USFWS) Status	State (CDFW/CNPS) Status	Habitat	Potential to Occur
Amphibians and Reptiles				
Ambystoma californiense California tiger salamander	T	T	Cismontane woodland, meadow and seep, riparian woodland, valley and foothill grassland, vernal pool; need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	**Absent:** Nearest breeding pond (other than Alton Lane Conservation Bank) is over 8 miles south of Study Area. The non-native grasslands and stormwater detention basin do not support suitable habitat for this species. None observed during on-site surveys. There is no suitable aquatic or upland habitat within or near the Study Area. The Study Area is considered to be "Out of Potential Range for CTS" in the Santa Rosa Plain Conservation Strategy (see Figure 2 of the Conservation Strategy; available online at https://www.fws.gov/sites/default/files/documents/2-Figures-1-to-5-Santa-Rosa-Plain-508.pdf. Also see Figure 4, Enclosure A.)
Chelonia mydas Green sea turtle	T	None	Marine environments, marine bays.	**Absent:** There is no suitable habitat on-site.
Rana draytonii California red-legged frog	T	None/SCS	Lowlands & foothills in or near permanent sources of deep water with dense shrubby or emergent riparian vegetation.	**Absent:** There is no suitable habitat on-site. The non-native grasslands and detention basin do not support this species. None observed during on-site surveys.
Invertebrates				
Syncaris pacifica California freshwater shrimp	E	E	Low gradient streams where riparian cover is moderate to heavy; shallow pools away from main streamflow.	**Absent:** There is no suitable habitat on-site.

Species	Federal (USFWS) Status	State (CDFW/CNPS) Status	Habitat	Potential to Occur

Legal Status Codes:
– = No designation
C = Candidate species for future listing as endangered or threatened
E = Federally or State listed as endangered
SC = Federal or State special concern species
T = Federally or State listed as threatened
1A = Plants presumed extirpated in California and either rare or extinct elsewhere.
1B = Plants rare, threatened or endangered in California and elsewhere
2A = Plants presumed extirpated in California but common elsewhere
2B = Plants rare, threatened, or endangered in California but more common elsewhere
3 = Plants about which more information is needed
Sources:
California Native Plant Society (CNPS). Inventory of Rare and Endangered Plants of California (sixth edition). David Tibor editor. California Native Plant Society. Sacramento, CA. California Natural Diversity Database (CNDDB) Rare Find program. Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.

Special-status Plant Species

As noted in the Table 14 above, all 16 special-status plant species were considered to be absent from the project site due to a lack of suitable habitat. Prior to this determination, surveys were conducted at a reference site (Alton Lane Conservation Bank), approximately 3.6 miles south of the project site during the blooming periods for five plant species that are further described below. Reference sites provide nearby accessible occurrences of plants to determine whether the plants in question are identifiable at the time of the year the botanical field survey has taken place. On-site surveys were conducted by Bole & Associates on March 17, 2021, March 10, 2022, and April 26, 2022. All five species were identified in bloom at the reference site. Moreover, the 2022 Botanical Assessment concluded that the stormwater detention basin is not considered to be potential suitable habitat for the listed vernal pool plant species (Sonoma sunshine, Burke's goldfield, and Sebastopol meadowfoam) for the following reasons:

- The hydrology for the site is a perennial hydrology and artificially supported by runoff from the adjacent business development. The hydrology supports a perennial wetland and not a seasonal wetland type, such as a vernal pool. The detention basin was designed to hold stormwater that also likely contains many contaminants from runoff from the adjacent commercial development. The water goes off-site and is connected to the Town's stormwater system.
- The plant species that occur in the wetland associated with the detention basin are not plants associated with vernal pools, primarily due to the prolonged hydrologic period, but also because the detention basin is an excavated area approximately 10 feet lower than the rest of the property, and likely does not have a hardpan or claypan layer that would also be associated with a vernal pool type wetland.
- The detention basin, as mentioned, was constructed specifically for the purpose of processing the runoff from the business park. Gil Falcone with the North Coast RWQCB has stated in an

email to David Noren with EBA Engineering that the State would not take jurisdiction over this site because: "*. . . Our regulations state that an artificial wetland that has been "constructed and is currently used and maintained, primarily for the following purposes . . . are not waters of the state . . . " Section II.3.d. includes: iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation . . . under a stormwater program*."

- There is a maintenance agreement for the detention basin that could potentially require that vegetation be periodically removed from the site to provide sufficient storage, which would further preclude this area as potential suitable habitat.[47]

Sonoma Sunshine

Sonoma sunshine (*Blennosperma bakeri*) is a federal listed endangered species and a State listed threatened species. This species occurs only in Sonoma County ranging from near the Town of Windsor in the north to Rohnert Park in the south. Sonoma sunshine grows in vernal pools, the grassy margins of swales (shallow channels that connect vernal pools), and seasonally wet grasslands at elevations ranging from 9 to 101 meters (approximately 29 to 331 feet) in the Sonoma Valley and between 21 to 43 meters (approximately 69 to 141 feet) on the Santa Rosa Plain. This species typically is more abundant in portions of vernal pools and swales which lack dense cover by non-native plants, matted leaf litter, or algal mats. Sonoma sunshine primarily grows on Huichica loam soils north of Highway 12. The project site's soils are predominately disturbed Huichica loam with a significant amount of cut-and-fill (gravel) from the demolition of the previous agricultural building and grounds. On-site surveys conducted during the normal blooming cycle (March through May) of Sonoma sunshine did not reveal the presence of this species.[48] Additionally, the 2022 Botanical Assessment concluded that the stormwater detention basin is not considered to be potential suitable habitat for this species for the reasons outlined above, and this species is therefore considered absent from the project site.[49]

Congested-headed Hayfield Tarplant

Congested-headed hayfield tarplant (*Hemizonia congesta ssp. congesta*) is not listed pursuant to either the Endangered Species Act or CESA but is designated as a California Rare Plant Rank (CRPR) 1B.2 plant. Congested-headed hayfield tarplant is a spindly, thin-stemmed annual herb growing erect to 10-80 centimeters (approximately 4 to 31 inches) in height. Like other tarweeds, the stem and foliage are glandular and have an odor reminiscent of tar. The CNDDB lists numerous occurrences of this species within 0.5 mile of the project site. On-site surveys conducted during the normal blooming cycle (April-November) of congested-headed hayfield tarplant did not reveal the presence of this species.[50] Based on the high level of disturbance and lack of suitable soil types within the project site, it was determined that this species is absent from the project site.

[47] Jane Valerius Environmental Consulting. 2022. Shiloh Crossing Project. 295 Shiloh Road, Windsor, CA.
[48] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[49] Jane Valerius Environmental Consulting. 2022. Shiloh Crossing Project. 295 Shiloh Road, Windsor, CA.
[50] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.

Burke's Goldfields

Burke's goldfields (*Lasthenia burkei*) is a federal listed endangered species, a State Rare plant species, and a CRPR 1B.1 plant. The primary habitats of Burke's goldfields are shallow vernal pools and wet swales with valley grassland and oak woodland habitats. On-site surveys conducted during the normal blooming cycle (April through June) of Burke's goldfields did not reveal the presence of this species.[51] Additionally, the 2022 Botanical Assessment concluded that the stormwater detention basin is not considered to be potential suitable habitat for this species for the reasons outlined above, and therefore this species is considered absent from the project site.[52]

Sebastopol Meadowfoam

Sebastopol meadowfoam (*Limnanthes vinculan*s) is a federal listed endangered species and a State endangered species of meadowfoam found in the Laguna de Santa Rosa and Cotati Valley of Sonoma County. Typically, the herb is found in hydric soils associations and is often found in joint occurrence with Burke's goldfields and Sonoma sunshine. On-site surveys conducted during the normal blooming cycle (April through May) of Sebastopol meadowfoam did not reveal the presence of this species.[53] Additionally, the 2022 Botanical Assessment concluded that the stormwater detention basin is not considered to be potential suitable habitat for this species for the reasons outlined above, and therefore this species is considered absent from the project site.[54]

Baker's Navarretia

Baker's navarretia (*Navarretia leucocephala ssp. bakeri)* is not listed pursuant to either the Endangered Species Act or CESA but is designated as a CRPR 1B.1 plant. CNDDB lists the plant's habitat as vernal pools, cismontane woodland, meadows, and seeps. On-site surveys conducted during the normal blooming cycle (April through July) of Baker's navarretia did not reveal the presence of this species.[55] Based on the high level of disturbance and lack of suitable soil types within the project site, it was determined that this species is absent from the project site.

All 16 special-status plant species (including the three listed vernal pool plant species known to occur on the Santa Rosa Plain) documented in the project vicinity are not expected to occur on the project site, based on the absence of suitable habitat and lack of observations during the Bole & Associates field surveys in 2021 and 2022 or during the 2022 Botanical Assessment. As such, no impacts to special-status plant species would occur from project construction and no mitigation would be required.

Special-status Wildlife Species

As noted in the Table 14 above, five of the six special-status wildlife species were considered to absent from the project site due to a lack of suitable habitat. Prior to this determination, surveys

[51] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[52] Jane Valerius Environmental Consulting. 2022. Shiloh Crossing Project. 295 Shiloh Road, Windsor, CA.
[53] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[54] Jane Valerius Environmental Consulting. 2022. Shiloh Crossing Project. 295 Shiloh Road, Windsor, CA.
[55] Jane Valerius Environmental Consulting. 2022. Shiloh Crossing Project. 295 Shiloh Road, Windsor, CA.

were conducted on the project site in 2021 and 2022 by Bole & Associates.[56] Additionally, Wildlife Research Associates conducted a field survey on July 12, 2022, in support of the 2022 CTSA.[57] California tiger salamander (*Ambystoma californiense)* and burrowing owl (*Athene cunicularia)* are discussed in further detail below.

California Tiger Salamander

The Sonoma County California tiger salamander (*Athene cunicularia)* (CTS) inhabits vernal pools and seasonal ponds, associated with grassland, and oak savanna plant communities below 60 meters (197 feet). Because this species spends most of their lives underground, CTS are rarely encountered, even in areas where they are abundant. Based on the knowledge of the life history, biology, and ecology of the species and the requirements of the habitat to sustain the essential life-history functions of the species, the USFWS determined that the Primary Constituent Elements (PCE) for the CTS in Sonoma County are as follows:

1. Standing bodies of fresh water (including natural and man-made (e.g., stock) ponds, vernal pools and other ephemeral or permanent water bodies that typically support inundation during winter/early spring and hold water for a minimum of 12 consecutive weeks in a year of average rainfall).
2. Upland habitats adjacent and accessible to and from breeding ponds that contain small mammal burrows or other underground refugia that California tiger salamanders depend upon for food, shelter, and protection from the elements and predation.
3. Accessible upland dispersal habitat between occupied locations that allow for movement between such sites.[58]

Although the project site supports non-native grasslands and pocket gophers, which would meet the PCE No. 2 standard, the project site has been identified by the Strategy as being located outside the occupied range of the species. The detention basin appears to receive water runoff from the northwest corner of the project site. However, although the basin detains water, it does not retain it at a suitable depth (at least 16 inches) for at least 12 weeks. In addition, the presence of raccoon, a known predator of amphibian larvae and adults, would have easy access to any larvae in such a shallow water body. As a result, the detention basin does not provide suitable breeding habitat for CTS and PCE No. 1 is not met. The closest reported sighting of CTS is at Alton Lane, Santa Rosa, approximately 3.6 miles south–southwest of the project site. There are no recorded occurrences, past or present, of CTS north of Mark West Creek, located approximately 1.3 miles south of the project site or on the east side of US-101 north of the City of Santa Rosa. There are no movement corridors between known locations and the project site. US-101 would be considered a barrier to movement from west to east. In addition, commercial/residential developments exist on three sides

[56] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[57] Wildlife Research Associates. 2022. California Tiger Salamander Analysis. 295 Shiloh Road, Windsor, Sonoma County.
[58] Ibid.

of the project site and Shiloh Road, which ranges up to 72 feet wide, runs along the majority of the southern boundary of the project site. As a result, PCE No. 3 is not met.[59]

As shown in Figure 4 of the Bole & Associates 2022 BRA and WD, and in Figure 2 of the Strategy, the site is shown as "Out of Potential Range of CTS." As stated in the Strategy, under Section 5.3.3.3 *Projects Where Presence of CTS is Not Likely*, "Impacts to CTS is not likely on some lands beyond 1.3 miles from breeding sites, or on lands within 1.3 miles from breeding sites that are surrounded by significant barriers or are otherwise unsuitable CTS habitat. Neither surveys nor mitigation would be required for projects on these properties." While the project area is mapped within the Conservation Strategy Area by the USFWS, the project site is identified as already developed or no effect to endangered species. The 0.2:1 mitigation ratio, which is often applied to parcels beyond the 1.3-mile proximity to breeding habitat, does not apply to this parcel.[60]

Based on the rationale above, there is no suitable aquatic or upland habitat present to support this species within the project site.[61,62] As such, no impacts to this species would occur from project construction and no mitigation would be required.

Burrowing Owl

Burrowing owl (*Athene cunicularia*) is not listed pursuant to either the Endangered Species Act or CESA; however, it is designated as a bird or conservation concern by the USFWS, and a CDFW Special Species of Concern (SSC). Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds. This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel (*Otospermophilus beecheyi*) but may use man-made structures such as cement culverts or pipes; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. The breeding season typically occurs between February 1 and August 31. On-site surveys for this species were conducted during their normal breeding season when their presence would be noticeable. There are few burrows capable of supporting the burrowing owl within the project site. Although the project site did not reveal the presence of the owl, because the project site could support burrowing owl, pre-construction surveys shall be required.[63] Implementation of MM BIO-1a would require pre-construction surveys and modification of construction activities to avoid disturbance of any active burrows, if present, to ensure potential project-related impacts to burrowing owl would be reduced to less than significant levels.

Nesting Birds

The trees present within the detention basin and on adjacent parcels provide nesting habitat for native, migratory, or other bird species protected under the Migratory Bird Treaty Act (MBTA) and Fish and Game Code. Additionally, grassland on-site and to the south provides potential foraging

[59] Wildlife Research Associates. 2022. California Tiger Salamander Analysis. 295 Shiloh Road, Windsor, Sonoma County.
[60] Ibid.
[61] Ibid.
[62] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[63] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.

habitat for these species. Construction activities could disturb nesting and breeding birds in trees and shrubs within and around the project site. Construction activities that occur during the avian nesting season (generally February 1 through August 31) could significantly disturb or destroy nesting sites for bird species afforded protection under the MBTA and Fish and Game Code.

If MBTA and/or Fish and Game Code protected species' nests are present, impacts to these species would be significant. MM BIO-1b would require pre-construction surveys and modification of construction activities to avoid disturbance of any active nests, including active nests of special-status bird species, if present, which would reduce impacts to migratory and nesting birds and raptors protected under the MBTA and Fish and Game Code to less than significant levels.[64]

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 Wildlife or United States Fish and Wildlife Service?

No impact. Analysis for this checklist question is based on results from BA's biological studies.[65,66,67] There is no riparian habitat located on the project site. One sensitive natural community (Northern Hardpan Vernal Pool habitat) has been identified southwest of the project site. Because of the developed nature of the surrounding properties, the past history of extensive past agricultural activities within the project site, and the Bole & Associates field surveys, there no evidence that the project site would support this sensitive natural community. Therefore, the proposed project would have no impact to riparian habitat or other sensitive natural communities.

c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than significant with mitigation incorporated. Analysis for this checklist question is based on results from the Bole & Associates biological studies and correspondence with Gil Falcone (2022 North Coast RWQCB).[68,69,70,71] Except for the 0.05-acre constructed stormwater detention basin, there are no aquatic features within the project site. On March 17, 2021, BA conducted a determination of waters of the United States under the guidelines of the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.* Using the methodologies described in the Wetland Delineation Manual, Bole & Associates found no evidence of seasonal or

[64] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[65] Bole & Associates. 2021. Biological Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[66] Bole & Associates. 2022. Spring 2022 Update: Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[67] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[68] Bole & Associates. 2021. Biological Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[69] Bole & Associates. 2022. Spring 2022 Update: Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[70] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[71] Gil Falcone (Sr. Environmental Scientist), email communication, July 5, 2022.

perennial wetland habitats within the project site. Moreover, the stormwater detention basin falls within the definition of the "non-jurisdictional waters" in Code of Federal Regulations Section 328.3 (10) *Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff*.

The stormwater detention basin is actively used by the industrial park to the north and west of the project site. The 2019 State Wetland Definition and dredge and fill procedures to waters of the State provides a jurisdictional framework for wetlands throughout the State. The stormwater detention basin in question meets the exemption threshold and is therefore not considered a State jurisdictional wetland or water of the State that would require permitting for dredge and fill activities. Specifically, regulations state that an artificial wetland that has been "constructed and is currently used and maintained, primarily for the following purposes . . . are not waters of the State." Section II.3.d includes: "iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a stormwater program." As such, the proposed project would not have a substantial adverse effect on State or federally protected wetlands and impacts would be less than significant.

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. Analysis for this checklist question is based on results from the Bole & Associates biological studies.[72,73,74] The project site is surrounded on three sides by industrial park businesses and on the south by Shiloh Road. As such, wildlife use is expected to be relatively low. The small diameter trees within the detention basin and those along the perimeter of the project site may support cover for local wildlife, but use of these trees by wildlife is not expected to be significant due to the relatively small size of the project site. The project site does not fall within an Essential Habitat Connectivity area mapped by the CDFW. Project-related impacts would be 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. Analysis for this checklist question is based on results from the Bole & Associates biological studies and an arborist report was prepared by Vantage Tree Care Inc. on January 25, 2022 (Appendix B).[75,76,77,78] The project site supports a stormwater detention basin with

[72] Bole & Associates. 2021. Biological Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[73] Bole & Associates. 2022. Spring 2022 Update: Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[74] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[75] Bole & Associates. 2021. Biological Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[76] Bole & Associates. 2022. Spring 2022 Update: Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[77] Bole & Associates. 2022. Biological Resources Assessment and Wetland Determination for the Shiloh Crossing Project. 295 Shiloh Road Town of Windsor, California.
[78] Vintage Tree Care, Inc. January 25, 2022. Arborist Report.

three small diameter willows and one small diameter cottonwood; however, there does not appear to be any "street," "landmark," or "heritage" trees within the project site. The Town of Windsor, Tree Technical Manual strongly recommends that a preliminary tree inventory be prepared and submitted to the Town prior to submittal of a preliminary Tentative Map or site plan to determine what trees are present on the project site.[79]

To ensure compliance with the Town of Windsor 2007 Tree Preservation and Protection Ordinance (Zoning Ordinance Chapter 27.36), the project applicant shall be required to prepare a tree inventory and demonstrate compliance with the applicable tree removal and replacement requirements or tree protection requirements (if applicable. The arborist report prepared for the project identified a Valley oak tree at the southeast corner of the project site with an 11-inch diameter, which is a protected tree under the Town's Tree Preservation and Protection Ordinance.[80,81] This tree would be removed as part of the proposed project. A Tree Removal Permit must be completed and submitted to the Planning Department for review and authorization.[82] Removal of a protected tree requires a tree replacement as a condition of approval.[83] This would reduce impacts 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 proposed project is located within the boundaries of the Strategy. The Strategy covers CTS and four endangered plant species: Burke's goldfields, Sonoma sunshine, Sebastopol meadowfoam, and many-flowered navarretia. The purpose of the Strategy is to:

- Establish a long-term conservation program sufficient to mitigate potential adverse effects of future development on the Santa Rosa Plain, and to conserve and contribute to the recovery of the listed species and the conservation of their sensitive habitat;
- To accomplish the preceding [goal] in a fashion that protects stakeholders' (both public and private) land use interests, and
- To support issuance of an authorization for incidental take of California tiger salamander and listed plants that may occur over the course of carrying out a broad range of activities on the Santa Rosa Plain.[84]

Based on the rationale discussed in checklist question A, the project site does not contain suitable habitat to support the listed species protected under the Strategy. As such, the proposed project would not result in conflict with the provisions of the Strategy.

[79] Town of Windsor. 2003. Tree Technical Manual. Standards and Specifications.
[80] Vintage Tree Care, Inc. January 25, 2022. Arborist Report.
[81] Town of Windsor. Town of Windsor Zoning Ordinance. Chapter 27.36 Tree Preservation and Protection. Website: https://images3.loopnet.com/d2/C0fAd_YpJJ1ASiIkE8hvV3_CjB-EruoimjsIcao-Qxs/document.pdf. Accessed August 9, 2022.
[82] Ibid.
[83] Ibid.
[84] United States Fish and Wildlife Service (USFWS). 2005. Santa Rosa Plain Conservation Strategy. Website: https://www.fws.gov/sacramento/es/Recovery-Planning/Santa-Rosa/santa-rosa-strategy.php. Accessed July 8, 2022.

Mitigation Measures

MM BIO-1a Pre-construction Surveys for Burrowing Owl (includes avoidance and passive relocation if found)

To determine whether burrowing owl have occupied the project site prior to its development, a qualified Biologist shall perform a pre-construction burrowing owl survey to determine burrow locations within 30 days prior to construction activities using California Department of Fish and Wildlife (CDFW) Guidelines. If construction is delayed or suspended for more than 30 days after the survey, the area shall be resurveyed. Surveys for occupied burrows shall be completed within all construction areas and within 300 feet of the proposed project impact area (where possible and appropriate based on locations of barren or ruderal habitats). At least 15 days prior to the expected start of any project-related ground disturbance activities, or the restart of activities, the project applicant shall provide a burrowing owl survey report with mapping exhibits to the CDFW. If no burrowing owl are detected during the pre-construction survey, no further action is necessary.

If burrowing owl are detected during the pre-construction survey, the following actions shall be taken to offset impacts during construction (as outlined in the CDFW 2012 Guidelines):

During the nonbreeding season (September 1 through January 31), no disturbance shall occur within an approximately 160-foot radius of an occupied burrow. During the nesting season (February 1 through August 31), occupied burrows shall not be disturbed within a 300-foot radius unless a qualified Biologist approved by the CDFW verifies through non-invasive methods that either (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

If owls must be moved away from the disturbance area, passive relocation techniques (as outlined by the CDFW [i.e., use of one-way doors]) should be used rather than trapping. At least one or more weeks shall be necessary to accomplish this and to allow the owls to acclimate to alternate burrows.

If unpaired owls or paired owls are present in or within 300 feet of areas scheduled for disturbance or degradation (e.g., grading) and nesting is not occurring, owls are to be removed per CDFW-approved passive relocation protocols. Passive relocation requires the use of one-way exclusion doors, which must remain in place at least 48 hours prior to site disturbance to ensure owls have left the burrow prior to construction. A CDFW-approved exclusion plan would be required to implement this measure.

If paired owls are nesting in areas scheduled for disturbance or degradation, nest(s) shall be avoided from February 1 through August 31 by a minimum 300-foot buffer or until fledging has occurred. Following fledging, owls may be passively relocated.

MM BIO-1b Protection of Active Bird Nests

The Town of Windsor shall require project applicants to retain the services of a qualified Biologist(s) to conduct a pre-construction nesting bird survey during the nesting season (February 1 through August 31) prior to all new development that may remove any trees or vegetation that may provide suitable nesting habitat for migratory birds or other special-status bird species. Surveys should be conducted no earlier than 30 days before construction activities are scheduled. If nests are found the qualified Biologist(s) shall identify appropriate avoidance measures.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.5 Cultural Resources and Tribal Cultural Resources *Would the project:*				
a) Cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐
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:				
d) 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	☐	☒	☐	☐
e) 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 I of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision I of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Environmental Evaluation

The analysis in this section is based, in part, on the Archaeological Survey Study of the Shiloh Mixed Used Apartment Project prepared by Historic Resource Associates in April 2021. The Archaeological Survey Study can be found in Appendix C.

Setting

This section describes the existing cultural and Tribal Cultural Resources (TCRs) setting and potential effects from the proposed project on the project site and its surrounding area. Descriptions and analysis in this section are also based on information provided by the California Native American Heritage Commission (NAHC) and Northwest Information Center (NWIC).

Northwest Information Center Records Search

Historic Resource Associates requested a records search from NWIC. On March 30, 2021, a records search for the project site and a one block radius was conducted at the NWIC located at Sonoma State University in Rohnert Park, California. The results of the records search indicated that there are no recorded cultural resources located within the project site or the one block area. Additionally, seven area-specific survey reports are on file with the NWIC for the one block search radius; two reports (S-022483 and S-032072) address the project site, indicating that the project site has previously been surveyed for cultural resources.

Native American Heritage Commission

On March 11, 2021, the NAHC responded to a records search request from Historic Resource Associates. The results indicated that the Sacred Lands File search was positive for Native American Cultural resources within the project site. The NAHC included a list of seven tribal representatives that may offer additional information regarding the proposed project.

Pedestrian Survey

On March 25, 2021, Dana E. Supernowicz, MA, RPA, of Historic Resource Associates, conducted a pedestrian survey for the project site. Cultural site sensitivity was deemed to be low to moderate for prehistoric and historical resources. In conclusion, after a careful field survey of the project area, no prehistoric archaeological or historical archaeological sites, features, or artifacts were identified, nor were any built environment resources discovered.

Cultural Resources

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5?

No Impact. CEQA Guidelines Section 15064.5 defines "historical resources" as resources listed in the California Register of Historical Resources (CRHR) or a local register, determined significant by the lead agency, or determined to be eligible by the California Historical Resources Commission for listing in the CRHR. The criteria for eligibility are generally set by the National Historic Preservation Act of 1966, which established the National Register of Historic Places (NRHP), and which recognizes properties that are significant at the federal, State, and local levels. To be eligible for listing in the NRHP and CRHR, a district, site, building, structure, or object must possess integrity of location, design, setting, materials, workmanship, feeling, and association relative to American history, architecture, archaeology, engineering, or culture. In addition, unless the property possesses exceptional significance, it must be at least 50 years old to be eligible.

The records search conducted at the NWIC determined that there are no historical resources within the project site or the one block radius. Additionally, the pedestrian survey did not identify any historical resources within the project site. Therefore, there would be no impact to historical resources.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than significant impact with mitigation incorporated. Section 15064.5 of the CEQA Guidelines defines significant archaeological resources as resources that meet the criteria for historical resources, as discussed above, or resources that constitute unique archaeological resources. A project-related significant adverse effect could occur if a project were to affect archaeological resources that fall under either of these categories.

The records search results conducted at the NWIC determined that there are no archaeological or historic resources within the project site and the one block radius. Additionally, the pedestrian survey did not identify any historical or archaeological resources within the project site. Nevertheless, it is possible that earthmoving activities associated with project construction could encounter previously undiscovered archaeological resources. Archaeological resources can include but are not limited to stone, bone, wood or shell artifacts or features, including hearths and structural elements. Damage or destruction of these resources would be potentially significant impact; therefore, implementation of MM CUL-1 would ensure that this potential impact is reduced to a less than significant level.

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

Less than significant with mitigation incorporated. No human remains or cemeteries are known to exist within or near the project site. Although human remains within the project site are unlikely, there is always the possibility that earthmoving activities associated with project construction could potentially damage or destroy previously undiscovered human remains. This would be a potentially significant impact.

In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5, Health and Safety Code Section 7050.5, and Public Resources Code Sections 5097.94 and 5097.98 must be followed. MM CUL-2 further specifies the procedures to follow in the event human remains are uncovered. Along with compliance with these guidelines and statutes, implementation of this mitigation would reduce potential impacts related to human remains to a less than significant level.

Tribal Cultural Resources

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:

d) 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

Less than significant with mitigation incorporated. The records search conducted at the NWIC, which included a search of the CRHR and NRHP, did not identify any listed or eligible TCRs that would

be adversely affected by the proposed project. Additionally, the pedestrian survey conducted by FirstCarbon Solutions (FCS) on March 25, 2021, failed to identify any TCRs. However, the NAHC Sacred Land Files produced a positive result for TCRs in the project vicinity and included a list of seven tribal representative that may offer additional information regarding the proposed project. The Town mailed notices to these tribes and none of the tribes requested consultation. Though the likelihood of encountering TCRs is low for the reasons described above, it is possible that earthmoving activities associated with project construction could encounter previously undiscovered archaeological resources. Should any undiscovered TCRs be encountered during project construction, implementation of MM CUL-1 and MM CUL-2, would reduce potential impacts to a less than significant level.

e) 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 I of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision I of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than significant with mitigation incorporated. Senate Bill (SB) 18 and Assembly Bill (AB) 52 consultation was initiated by the Lead Agency, the Town of Windsor. The Town mailed notices to the Graton Rancheria and Lytton Rancheria on November 2, 2021. On November 19, 2021, Lytton Rancheria replied indicating that the Lytton Rancheria is not requesting further consultation. No other responses were received during the 30-day consultation period. All Lead Agency and Tribal correspondence are provided in Appendix C.

Mitigation Measures

MM CUL-1 In the event that buried cultural resources are discovered during construction, operations shall stop within 100 feet of the find and a qualified Archaeologist shall be consulted to determine whether the resource requires further study. The qualified Archaeologist shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate California Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.

If the resources are determined to be unique historic resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the Archaeological Monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery

until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts recovered as a result of mitigation shall be donated to a qualified scientific institution approved by the Lead Agency where they would be afforded long-term preservation to allow future scientific study.

MM CUL-2 In the event of an accidental discovery or recognition of any human remains, Public Resources Code Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine whether the remains are Native American and if an investigation of the cause of death is required. If the Coroner determines the remains to be Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The Most Likely Descendant (MLD) may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in Public Resources Section 5097.98, or
2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the MLD or on the project site in a location not subject to further subsurface disturbance:
   - The NAHC is unable to identify a MLD or the MLD failed to make a recommendation within 48 hours after being notified by the commission.
   - The descendant identified fails to make a recommendation.
   - The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.6 Energy *Would the project:*				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Environmental Evaluation

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than significant impact. This impact discussion focuses on determining whether the proposed project would result in the wasteful, inefficient, or unnecessary consumption of energy resources, following the guidance provided in Appendix F of the CEQA Guidelines as well as the analytical precedent set by *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) 75 Cal.App.5th 63, 164-168).

According to Appendix F of the CEQA Guidelines, the goal of conserving energy is translated to include decreasing overall per capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy sources. In *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) 75 Cal.App.5th at pp. 164-168), the Appellate Court concluded that the analysis of wasteful, inefficient, and unnecessary energy consumption was not adequate because it did not consider whether additional renewable energy features could have been added to the project.

For purposes of this analysis, the proposed project would be considered to result in a potentially significant impact if it would result in wasteful, inefficient, or unnecessary consumption of energy resources. Considering the guidance provided by Appendix F of the CEQA Guidelines and the Appellate Court decision in *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) 75 Cal.App.5th at pp. 164-168, the proposed project would be considered to result in wasteful, inefficient, or unnecessary consumption of energy resources if it would conflict with the following energy conservation goals:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, or oil; and
- Increasing reliance on renewable energy sources.

Construction

During construction, the proposed project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings, lighting, and other energy needs. No natural gas would be utilized as part of construction. Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during site demolition, site preparation, grading, paving, and building construction. Limitations on engine idling and requirements that equipment be properly maintained would result in fuel savings. California regulations (CCR Title 13, §§ 2449(d)(3) and 2485) limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB.

The types of equipment utilized for project construction would include gasoline- and diesel-powered construction vehicles and equipment, including trucks, bulldozers, forklifts, and cranes. Construction equipment is estimated to consume a total of 59,102 gallons of diesel fuel over the entire construction duration (Appendix A).

Fuel use associated with construction vehicle trips generated by the proposed project was also estimated; trips include construction worker trips, haul trucks trips for material transport, and vendor trips for construction material deliveries. Fuel use from these vehicles traveling to the proposed project was based on (1) the projected number of trips the proposed project would generate during construction, (2) average trip distances by trip type, and (3) fuel efficiencies estimated in the ARB Emissions Factors mobile source emission model (EMFAC). The specific parameters used to estimate fuel usage are included in Appendix A. In total, the proposed project is estimated to generate approximately 1,240,404 Vehicle Miles Traveled (VMT) and a combined 51,380 gallons of gasoline and diesel for vehicle travel during construction.

Other equipment could include construction lighting, field services (office trailers), and electrically driven equipment such as pumps and other tools. The Construction Hours Ordinance in Title VII Building and Housing Section 7-1-190 of the Town's Municipal Code restricts construction activities to the hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 8:00 a.m. and 7:00 p.m. on Saturday. No construction activity is permitted on Sundays unless expressly authorized by the Building Official; but in no event shall such construction activity be permitted on Sunday before 9:00 a.m. or after 5:00 p.m.[85] As on-site construction activities would be restricted between these hours, it is anticipated that the use of construction lighting would be minimal. Single-wide mobile office trailers, which are commonly used in construction staging areas, generally range in size from 160 square feet to 720 square feet. A typical 720-square-foot office trailer would consume approximately 24,555 kilowatt-hours (kWh) during the 24-month construction phase (Appendix A). Because of the temporary nature of construction and the financial incentives for developers and contractors to use energy-consuming resources in an efficient manner, the construction phase of the proposed project would not result in wasteful, inefficient, and unnecessary consumption of energy.

[85] Town of Windsor. 2019. Code of Ordinances. Website: https://library.municode.com/ca/windsor/codes/code_of_ordinances?nodeId=TITVIIBUHO_CH1GE_ART1PUAD_7-1-190COHO. Accessed May 16, 2022.

The proposed project's construction is not anticipated to result in unusually high energy use. Limitations on idling of vehicles and equipment and requirements that equipment be properly maintained would result in fuel savings. Similarly, compliance with State regulations would limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB. Additionally, the overall construction schedule and process is already designed to be efficient to avoid excess monetary costs. For example, equipment and fuel are not typically used wastefully due to the added expense associated with renting the equipment, maintaining it, and fueling it. Therefore, the opportunities for future efficiency gains during construction are limited. Therefore, it is anticipated that the construction phase of the proposed project would not result in wasteful, inefficient, and unnecessary consumption of energy. Construction-related energy impacts would be less than significant.

Operation

The proposed project would consume energy as part of building operations and transportation activities. Project energy consumption is summarized in Table 15.

Table 15: Annual Project Energy Consumption

Energy Resource	Annual Consumption
Electricity	839,227 kWh
Natural Gas	1,557,878 kBTU
Vehicle Fuel	91,384 gallons
Notes: kBTU = kilo-British Thermal Unit kWh = kilowatt-hour Source: Appendix A.	

As illustrated in Table 15, operation of the proposed project is estimated to consume nearly 840 megawatt-hour (MWh) of electricity, 1,557,878 kilo-British Thermal Unit (kBTU) of natural gas, and an estimated 91,384 gallons of vehicle fuels annually under unmitigated conditions. As previously discussed, the proposed project would be considered to result in a potentially significant impact if it would result in wasteful, inefficient, or unnecessary consumption of energy resources. Considering the guidance provided by Appendix F of the CEQA Guidelines and the Appellate Court decision in *League to Save Lake Tahoe Mountain etc. v. County of Placer* (2022) ^{75} Cal.App.5th 63, 164-168, the proposed project would be considered to result in wasteful, inefficient, or unnecessary consumption of energy resources if it would conflict with the following energy conservation goals:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, or oil; and
- Increasing reliance on renewable energy sources.

Decreasing Overall Per Capita Energy Consumption

Project-related vehicle trips would consume fuel throughout the life of the proposed project due to project employee vehicles, delivery vehicles, and heavy-duty trucks. The project site is located approximately 0.2 mile northwest of the US-101 via the Shiloh Road interchange. As such, it would be in proximity to a regional route of travel. Sonoma County Transit provides bus service in the Town of Windsor. Sonoma County Transit's Route 60 (Cloverdale, Healdsburg, Windsor, Santa Rosa) has two stops within 1,000 feet to the project site. The Sonoma Marin Area Rail Transit (SMART) Commuter Rail line proposes to extend its service from Santa Rosa to Windsor and north to Cloverdale via the Northwestern Pacific Railroad (NWP) track. Additionally, long-term and short-term bicycle parking would be provided throughout the project site for both resident, employee, and customer use, and sidewalks and pedestrian infrastructure would be provided throughout the project site and along both the Shiloh Road frontages. The existing transportation facilities in the area would provide future residents, visitors, and employees associated with the proposed project with access to public transportation, thus further reducing per capita fuel consumption during project operation.

In addition, the proposed project's buildings would be designed and constructed in accordance with the energy efficiency standards of Title 24. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards, widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation, resulting in an incremental decrease in per capita consumption when compared to existing development in the area. Moreover, as discussed in Section 1.4.5, Sustainability Features, the proposed project would endeavor to achieve zero-net-energy standards through design features such as installing low-emissivity windows and doors and using high performance exterior walls, which would result in further reductions in per capita energy consumption. Therefore, the proposed project would be consistent with this criterion.

Decreasing Reliance on Fossil Fuels

The proposed project would be considered to conflict with this criterion if it did not take steps to decrease the reliance on fossil fuels. As discussed in Section 1.4.3, Access, Circulation, and Parking, the proposed project would include EV charging infrastructure consisting of five parking spaces capable of supporting future charging stations. The inclusion of these features would facilitate the region's EV adoption and an increase in EV and clean air and high occupancy vehicle use by residents, employees, and visitors of the proposed project. Accompanied by Statewide GHG emission reduction strategies, such as SB 100 which requires the mix of resources utilized to generate electricity sold in the State to continually increase its proportion of renewables through 2045 when 100 percent of generation sources shall be carbon-free, would help decrease future residents', employees', and visitors' reliance on fossil fuels for transportation energy. Therefore, the proposed project would be consistent with this criterion.

Increasing Reliance on Renewable Energy Sources

As previously discussed, the proposed project would include EV charging infrastructure consisting of five parking spaces capable of supporting future charging stations. The inclusion of these features would facilitate the region's EV adoption and an increase in EV and clean air and high occupancy vehicle use by residents, employees, and visitors of the proposed project. Accompanied by Statewide GHG emission reduction strategies, such as SB 100 which requires the mix of resources utilized to generate electricity sold in the State to continually increase its proportion of renewables through 2045 when 100 percent of generation sources shall be carbon-free, would help decrease future residents', employees', and visitors' reliance on fossil fuels for transportation energy. In addition, the proposed project would include an on-site solar system with an expected annual generation capacity of 593,000 kWh. As such, the proposed project would include on-site renewable electricity generation and facilitate a greater dependance on renewable energy sources. Therefore, the proposed project would be consistent with this criterion.

Conclusion

As detailed above, the proposed project would be consistent with the relevant provisions of Appendix F of the CEQA Guidelines. Therefore, operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources and impacts are less than significant.

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Less than significant impact. During the construction phase, the proposed project would adhere to California regulations (CCR Title 13, §§ 2449 and 2485) limit idling from both on-road and off-road diesel-powered equipment. The proposed project would be required to comply with these regulations, which are enforced by ARB. Part 11, Chapter 5 of the State's Title 24 Energy Efficiency Standards establish mandatory measures for nonresidential buildings, including material conservation and efficiency. The proposed project would also be required to comply with these mandatory measures.

Furthermore, building and site designs would be reviewed by the Town for energy impacts, prior to approval of the proposed project. Therefore, it is anticipated that the construction phase of the proposed project would not conflict with State or local renewable or energy efficiency objectives. Construction-related energy impacts would be less than significant.

Operation

During project operation, energy consumption for building operations and transportation activities would involve energy consumption for multiple purposes including, but not limited to, building heating and cooling, lighting, and appliances. Part 11, Chapter 5 of the State's Title 24 Energy Efficiency Standards establish mandatory measures for nonresidential buildings, including material conservation and efficiency, which the proposed project would be required to meet. The State's Title 24 Energy Efficiency Standards are widely regarded as the most advanced energy efficiency standards and would help reduce the amount of energy required for lighting, water and space heating, and air conditioning in buildings and promote energy conservation.

The General Plan Environmental Resources Element, Housing Element, and Transportation and Mobility Element provides energy conservation policies and goals that would apply to the proposed project. The following are energy conservation policies from the General Plan that are applicable to the proposed project:

Environmental Resources

ER-5.4 **Encourage Development Patterns that Reduce Greenhouse Gas Emissions.** The Town shall strive to reduce greenhouse gas emissions by encouraging compact, mixed-use, pedestrian/bicycle friendly, transit-oriented development that reduces VMT; promoting energy efficient building enhancements, construction practices, design, and site planning; improving the job-to-housing ratio; and other methods of reducing greenhouse gas emissions while maintaining a balance of housing types.

ER-5.8 **Energy Conservation and Efficiency Programs.** The Town shall promote energy conservation/energy efficiency improvement programs for residential and commercial properties such as those offered by Sonoma County Energy Independence Program (SCEIP) and Property Assessed Clean Energy (PACE), that reduce energy demand which contribute to background levels of regional air emissions and GHG emissions.

ER-5.9 **Energy Conservation through Land Use.** The Town shall promote the creation of a land use pattern that reduces operational energy requirements, especially for transportation purposes, by:

- Avoiding land use configurations and siting decisions that result in single-purpose automobile trips, and instead encouraging patterns that result in multi-purpose trips.
- Avoiding land use configurations and siting decisions that result in single-purpose automobile trips, and instead encouraging patterns that result in multi-purpose trips.
- Promoting land use patterns that provide employment opportunities for Windsor residents.

ER-5.10 **Energy Performance Standards.** The Town shall require new construction to meet targeted energy performance standards to advance Town greenhouse gas reduction and other sustainability goals and policies identified in the General Plan. The Town will allow new development to select from a range of options to achieve a minimum energy performance standard, including but not limited to:

- solar easements to guarantee access to increased renewable;
- energy generation;
- installation of EV charging stations in homes and in commercial development to increase the ability for the public to use zero-emission vehicles;
- passive heating and cooling building design;
- solar roof and carport panels;

- cool roofs;
- smart appliances;
- wind generation;
- installation of energy efficient appliances and fixtures; and
- other emerging technologies as they become available.

ER-5.11 **Zero-Net-Energy Goals.** The Town shall strive to implement the State goal of zero-net-energy (ZNE) in all new residential construction by 2020 and ZNE in all new commercial construction by 2030.

ER-5.14 **Compliance with Energy Regulations.** The Town shall continue to enforce State energy regulations governing energy consumption and use of solar and other renewable energy resources in existing and new development.

ER-5.15 **Title 24 Application.** The Town shall require energy conservation standards for new residential construction, commercial construction, and within Town facilities, as contained in Title 24 of the California Code of Regulations, to be periodically reviewed to identify opportunities for adopting standards that more closely respond to local conditions, especially in the area of passive design, to reduce cooling loads. Based on the project applicant, the proposed project would include photovoltaic voltage systems that would generate 593,000 kWh of electricity per year.

ER-5.19 **Energy Conservation Measures and Education.** The Town shall encourage energy conservation measures, such as insulation and weather-stripping, in existing structures through public education and financial assistance to low-and moderate-income families.

ER-5.20 **Windsor Serving as the Energy Conservation Model.** The Town government shall be in the forefront of energy conservation efforts locally and regionally by undertaking and publicizing energy efficiency and renewable energy resource programs such as Sonoma County Energy Independence Program (SCEIP) and Property Assessed Clean Energy (PACE) and requiring all new Town buildings to be demonstration buildings and models of emerging energy and water technologies.

Housing

H-8.1 The Town shall ensure that all new residential development meets or exceeds the standards contained in Title 24, Part 6 of the California Code of Regulations (Energy Efficiency Standards for Residential and Nonresidential Buildings) and the Town's Green Building Ordinance, and encourage the retrofitting of existing development to improve energy and conservation.

H-8.2 The Town shall establish a development pattern that helps reduce vehicle miles traveled and promotes transit ridership, and pedestrian and bicycle access.

H-8.3 The Town shall encourage homeowners and property owners of existing residential buildings to incorporate energy and water efficient features and renewable energy facilities in structures.

H-8.5 The Town shall encourage residential development in proximity to the SMART Station, consistent with the Windsor Station/Downtown Specific Plan, to reduce vehicle miles traveled and promote transit ridership.

Transportation and Mobility

M-1.2 **Trip Generation Reduction for Applicable Developments**. The Town shall consider appropriate reductions to the trip generation for projects with a multimodal system approach that increases transit ridership, biking, and walking, in order to reduce air pollution, energy consumption, and greenhouse gas emissions.

General Plan Policies ER-5.10, ER-5.14, ER-5.15 and H-8.1 would reinforce the implementation and enforcement of the California Building and Energy codes to promote energy efficient building design and construction. The proposed project would be required by State law to comply with the Title 24 Energy Efficiency Standards.

General Plan Policy M-1.2 aims to increase transit ridership, biking, and walking, in order to reduce air pollution, energy consumption, and greenhouse gas emissions. The project site is located in close proximity to multiple Sonoma County Transit bus stops, and the proposed project would include sidewalks and pedestrian infrastructure, as well as long-term and short-term bicycle parking for resident, employee, and customer use, throughout the project site. The proposed project would provide 5 Level 2 EV charging stations in the parking lot that would serve residents and clientele of the market. Additionally, the SMART Commuter Rail line proposes to extend its service from Santa Rosa to Windsor and north to Cloverdale via the NWP track. These project design features support the implementation of Policy M-1.2 to increase residents' options for alternative modes of transportation.

As detailed above, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. This impact would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.7 Geology and Soils *Would the project:*				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Environmental Evaluation

Setting

The site-specific information and analysis in this section is drawn from a Geotechnical Engineering Report conducted by Terracon Consultants, dated November 17, 2017, and revised May 7, 2019. It is included in Appendix E.

Regionally, the Town of Windsor is situated in the northern portion of the San Francisco Bay Area within the Coast Ranges Geomorphic Province of California. The Coast Ranges Geomorphic Province is characterized by a series of northwest trending hills and intervening valleys that align subparallel with the San Andreas Fault System. Northern California is considered a region of high seismic activity. The major active faults located within 20 miles of the project site include the San Andreas Fault (approximately 19 miles southwest), Rodgers Creek Fault (approximately 3 miles northeast), and Maacama Fault (approximately 5 miles northeast).[86]

Soil in the vicinity of the site is identified by the United States Department of Agriculture—Soil Conservation Service as loam of the Huichica Soil Series (HtA and HwB), at 0 to 5 percent slopes. The Huichica series loam occurs on terraces. These soils formed in alluvium derived from igneous, metamorphic, and sedimentary rock sources. Huichica loam is classified with high runoff, slow infiltration rates, and is considered moderately well drained.[87]

University of California Museum of Paleontology Database Search

On February 4, 2019, Dr. Ken Finger, PhD, performed a University of California Museum of Paleontology (UCMP) database records search for the project site. The project site is in Section 19, Township 8N, Range 8W, of the *Healdsburg, California* 7.5-minute Topographic Quadrangle Map (2015 USGS 7.5-series topographic map). According to the geologic map by Delattre and Gutierrez (2013), the project site and much of the surrounding 0.5-mile search area are located on older Holocene alluvium (Qhf_2) and Holocene to latest Pleistocene basin deposits (Qb). Other units mapped in the search area are the latest Holocene alluvial deposits (Qha) and older alluvium (Qoa) of early to late Pleistocene age. Potentially fossiliferous deposits are mapped within the southwest corner of the project site but likely extend in the shallow subsurface below the rest of the site. Holocene deposits are too young to be fossiliferous, while Pleistocene deposits have a high paleontological sensitivity but low potential for significant paleontological resources.

The UCMP database search focused on Pleistocene vertebrates from Sonoma County. The results are 10 localities that yielded 12 vertebrate specimens including western pond turtle (*Clemmys marmorata*), Harlan's ground sloth (*Glosstherium harlandi*), robust ground sloth (*G. robustus*), ancient bison (*Bison antiquus)*, horse (*Equus*), and American mastodon (*Mammut mericanum*). None of the 10 paleontological localities, however, are within or near the 0.5-mile search radius, and the one closest to the project site is 8 miles to the southeast. Thus, the project site appears to have a low potential but high sensitivity for significant paleontological resources.

[86] Terracon. 2019. Geotechnical Engineering Report: Windsor, Sonoma County, California. May 7.
[87] United States Department of Agriculture Natural Resources Conservation Service. 2019. Web Soil Survey. Website: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed March 16, 2022.

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less than significant impact. The Geotechnical Engineering Report conducted by Terracon Consultants (Appendix E) concluded that the project site is not located within an Alquist-Priolo Earthquake Fault Zone based on review of the State Fault Hazard Maps. The nearest active fault zone is the Rogers Creek Fault, approximately 3 miles northeast of the project site. In a seismically active zone region such as Northern California, there is always some possibility of future faulting at any site. However, historical occurrences of surface faulting generally follow the trace of more recently active faults. There are no known active faults crossing the project site. There is little risk of fault-related ground rupture at the site during earthquakes. Furthermore, construction and design would use standard engineering and seismic safety design techniques in accordance with the 2019 California Building Standards Code (CBC), which would reduce impacts in case of rupture of a nearby fault. Therefore, the possibility of the proposed project directly or indirectly experiencing significant fault rupture is low and project impacts related to the rupture of a known earthquake fault are less than significant.

ii) Strong seismic ground shaking?

Less than significant impact. The project site could experience strong to violent ground shaking as a result of an earthquake on the Rodgers Creek Fault, as well as ground shaking associated with seismic activity on other regional faults. Strong ground shaking can be expected to occur during earthquakes, based on the distance to epicenters, depth and magnitude of the shock, and the characteristics of the underlying soil materials at the site. The proposed project would be required to be designed and constructed in accordance with all prevailing standards for earthquake-resistant construction consistent with the CBC. Conformance with CBC requirements would reduce seismic ground shaking impacts to a less than significant level.

iii) Seismic-related ground failure, including liquefaction?

Less than significant impact. Liquefaction is a mode of ground failure that results from the generation of excess pore-water pressures during earthquake ground shaking, causing loss of shear strength. This phenomenon generally occurs in areas of high seismicity, where groundwater is shallow, and loose granular soils or relatively non-plastic fine-grained soils are present. The Geotechnical Engineering Report concluded that there is a potential for liquefaction induced settlement to exist within the medium dense clayey sand strata encountered between 40 and 50 feet beneath the project site. However, with the presence of a thick layer of non-liquefiable soil above the potentially liquefiable soils, the risk of potential structural distress from a liquefaction event is low. Impacts would be less than significant.

iv) Landslides?

No impact. As outlined in the General Plan EIR, small areas in the foothills on the eastern edge of the Town are subject to a risk of landslides. However, in the flatter areas of the Town is not subject to substantial risk from landslides. The project site relatively flat with little difference in elevation, and is surrounded by land that is developed and is also relatively level. The proposed project would not result in any risk of landslide and no impact would occur.

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

Less than significant impact. Project construction would include clearing, grading, excavation, and other earthmoving activities. These activities would expose surface soils to wind and precipitation, which could lead to soil erosion. The proposed project would comply with the Town's National Pollutant Discharge Elimination System (NPDES) permit and Section 9-4-301 of the Municipal Code, which requires the preparation and implementation of a Storm Water Pollution Plan (SWPPP). Because the proposed project would disturb more than 1 acre of soil, it would be required to obtain the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit), issued by the California State Water Resources Control Board (State Water Board). The Construction General Permit requires the development and implementation of an SWPPP, which must list Best Management Practices (BMPs) that the proposed project would implement to control erosion and prevent the conveyance of sediments off-site. Implementation of the conditions of the Construction General permit would reduce erosion impacts resulting from project construction to less than significant. Once construction work is completed, the impervious surfaces and landscaping would minimize potential erosion risks. Therefore, impacts would be less than significant.

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 with mitigation incorporated. The Geotechnical Engineering Report concluded the clay soil near the surface could become unstable after precipitation events. Furthermore, there is an increased risk for possible development of unstable soil conditions if grading is performed during winter months, when it is more likely to be exposed to precipitation. The Geotechnical Engineering Report presented recommendations for on-site preparation, building foundations, and pavement design. Compliance with these recommendations, included in MM GEO-1, would reduce impacts associated with unstable soils to less than significant.

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

Less than significant with mitigation incorporated. The Geotechnical Engineering Report found highly expansive soils at the project site, which are subject to volume changes with fluctuating moisture contents. 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. To mitigate the impacts of the expansive soils, the Geotechnical Engineering Report recommends the

building slabs be underlain with either 18 inches of imported non-expansive engineered fill, or the surface 12 inches of the native expansive clays be chemically treated with lime. This recommendation is reflected in MM GEO-1. With the implementation of MM GEO-1, impacts 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 proposes connection to the existing sanitary sewer system for disposal of wastewater. It would not rely upon septic tanks, leach fields, or alternative wastewater disposal systems. The proposed project would have no impact related to soils capability to support wastewater disposal.

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

Less than significant impact with mitigation incorporated. A search of the UCMP database resulted in records of paleontological finds on the project site or within the 0.5-mile search radius. As described above, the project site appears to have a low potential but high sensitivity for significant paleontological resources. Given the low potential of encountering Pleistocene vertebrates anywhere within the confines of the project site, no paleontological resources are expected to be encountered during construction activities associated with the proposed project.

As with historical and archaeological resources, it is possible that earthmoving activities associated with project construction could encounter previously undiscovered paleontological resources. Damage or destruction of these resources would be a potentially significant impact. Furthermore, for projects occurring on sites with high paleontological sensitivity, the General Plan EIR requires implementation of MM CR-2, referred to in this document as MM GEO-2. Implementation of this mitigation would reduce impacts associated with paleontological resources to less than significant.

Mitigation Measures

MM GEO-1 Prior to project approval, construction and site plans shall incorporate the site preparation, grading, foundation support, earthwork, and other recommendations of the Geotechnical Engineering Report for the project site prepared by Terracon Consultants on November 17, 2017, and revised on May 7, 2019, including all recommended measures to mitigate surface and subsurface geologic and soil conditions. Incorporation of recommended measures shall be confirmed by the Town Engineer.

MM GEO-2 [Given the project site has high paleontological sensitivity], a paleontological assessment, and avoidance and/or mitigation for potential impacts to paleontological resources [are required]. The Town shall require the following specific requirements for projects that could disturb geologic units with high paleontological sensitivity, whether they are mapped at the surface or hypothesized to occur in the subsurface.

1. **Retain a Qualified Paleontologist.** Prior to initial ground disturbance within highly sensitive geologic units, the applicant shall retain a project paleontologist, defined as a paleontologist who meets the Society of Vertebrate Paleontology (SVP) (2010) standards for Qualified Professional Paleontologist, to direct all mitigation measures related to paleontological resources. A qualified paleontologist (Principal Paleontologist) is defined by the SVP standards as an individual with an MS or PhD in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California, and who has worked as a paleontological mitigation project supervisor for a least one year.
2. **Paleontological Mitigation and Monitoring Program.** Prior to construction activity a qualified paleontologist should prepare a Paleontological Mitigation and Monitoring Program to be implemented during ground disturbance activity for the proposed project. This program should outline the procedures for construction staff Worker Environmental Awareness Program (WEAP) training, paleontological monitoring extent and duration, salvage and preparation of fossils, the final mitigation and monitoring report, and paleontological staff qualifications.
3. **Paleontological Worker Environmental Awareness Program.** Prior to the start of construction, the project paleontologist or his or her designee, shall conduct training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. The WEAP shall be fulfilled at the time of a pre-construction meeting at which a qualified Paleontologist shall attend. In the event of a fossil discovery by construction personnel, all work in the immediate vicinity of the find shall cease and a qualified Paleontologist shall be contacted to evaluate the find before restarting work in the area. If it is determined that the fossil(s) is(are) scientifically significant, the qualified Paleontologist shall complete the following conditions to mitigate impacts to significant fossil resources.
4. **Paleontological Monitoring.** Ground-disturbing construction activities (including grading, trenching, foundation work and other excavations) at the surface in areas mapped as high paleontological sensitivity and exceeding 5 feet in depth in areas overlying potentially high paleontological sensitivity units should be monitored on a full-time basis by a qualified paleontological monitor during initial ground disturbance. The Paleontological Mitigation and Monitoring Program shall be supervised by the project paleontologist. Monitoring should be conducted by a qualified paleontological monitor, who is defined as an individual who has experience with collection and salvage of paleontological resources. The duration and timing of the monitoring will be determined by the project paleontologist. If the project paleontologist determines that full-time monitoring is no longer warranted, he or she may recommend that monitoring be reduced to periodic spot-checking or cease entirely. Monitoring would be reinstated if any new or unforeseen deeper ground disturbances are required and reduction or suspension would need to be reconsidered by the Supervising

Paleontologist. Ground-disturbing activity that does not occur in areas mapped as high sensitivity or that do not exceed 5 feet in depth in areas overlying potentially high sensitivity units would not require paleontological monitoring.

5. **Salvage of Fossils.** If significant fossils are discovered, the project paleontologist or paleontological monitor should recover them. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist should have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Work may continue outside of a buffer zone around the fossil, usually 50-100 feet (specific distance may be determined by the project paleontologist).
6. **Preparation and Curation of Recovered Fossils.** Once salvaged, significant fossils should be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection (such as the University of California Museum of Paleontology), along with all pertinent field notes, photos, data, and maps. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the project paleontologist.
7. **Final Paleontological Mitigation Report.** Upon completion of ground-disturbing activity (and curation of fossils if necessary) the qualified Paleontologist should prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report should include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.8 Greenhouse Gas Emissions *Would the project:*				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental Evaluation

Setting

This section evaluates the possible impacts related to GHG emissions that could result from implementation of the proposed project. Where available, the significance criteria established by the applicable air quality management or air pollution control district (in this case, the BAAQMD) was relied upon to determine project impacts.

Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are referred to as GHGs. The effect is analogous to the way a greenhouse retains heat. There have been significant legislative and regulatory activities that directly and indirectly affect climate change and GHGs in California. The primary climate change legislation in California is AB 32, the California Global Warming Solutions Act of 2006, and SB 32, focusing on reducing GHG emissions in California. The proposed project would generate a variety of GHG emissions during construction and operation, including several defined by AB 32 such as CO_2, methane (CH_4), and nitrous oxide (N_2O).

To describe how much global warming a given type and amount of GHG may cause, the carbon dioxide equivalent (CO_2e) metric is used. The calculation of the CO_2e is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent reference gas, CO_2. For example, CH_4's warming potential of 25 indicates that CH_4 has 25 times greater warming effect than CO_2 on a molecule-per-molecule basis. A CO_2e is the mass emissions of an individual GHG multiplied by its global warming potential.

Thresholds of Significance

The Town chooses to rely on the BAAQMD's subject matter expertise on GHG emissions and utilize the advisory recommendations contained in their 2017 CEQA Air Quality Guidelines as well as their

recently adopted GHG significance thresholds for land use development projects.[88] The BAAQMD's 2022 significance thresholds for land use projects are listed below.

If a land use development project cannot demonstrate consistency with Criterion A or Criterion B, then that project would result in a potentially significant impact related to GHG emissions.

A. Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b), or
B. Projects must include, at a minimum, the following project design elements.
    a. Buildings:
        i. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
        ii. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
    b. Transportation:
        i. Achieve compliance with EV requirements in the most recently adopted version of CALGreen Tier 2.
        ii. Achieve a reduction in project-generated VMT below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted SB 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
            1. Residential projects: 15 percent below the existing VMT per capita.
            2. Office projects: 15 percent below the existing VMT per employee.
            3. Retail projects: no net increase in existing VMT.

Considering the General Plan currently stands as the local qualified reduction strategy, consistent with the requirements established under CEQA Guidelines Section 15183.5(b),[89] the Criterion A of the above BAAQMD-recommended is utilized to determine project impacts related to GHG emissions. Therefore, the proposed project would be considered to result in a potentially significant GHG emissions impact if it is inconsistent or conflicts with the land use pattern envisioned by the General Plan or the policies and measures contained in the General Plan.

Would the project:

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

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

[88] Bay Area Air Quality Management District (BAAQMD). 2022. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans. April.
[89] Town of Windsor. 2018. Town of Windsor 2040 General Plan Final Environmental Impact Report SCH #2016112065. February.

Less than significant impact. This impact is addressed by assessing the proposed project's consistency with the General Plan.[90]

Town of Windsor 2040 General Plan Consistency

The Environmental Resources Chapter of the General Plan contains GHG reduction targets that align with AB 32 and SB 32, which call for communities in California to reduce emission levels to 1990 levels by 2020 and 40 percent below 1990 levels by 2030.[91] The Town also continues to encourage smart growth development practices in accordance with SB 375 to reduce VMT to and from new development, while enhancing connectivity with alternative modes of travel. GHG emissions reduction policies in the General Plan are aimed at supporting local, regional, and State efforts to reduce GHG emissions. The General Plan includes a qualified GHG reduction plan, and the GHG emissions reduction policies contained therein apply largely to the Town and not to individual development projects; therefore, consistency with the General Plan is primarily determined through the proposed project's consistency with the General Plan land use designation for the project site. Nonetheless, the GHG emissions reduction policies of the General Plan are listed below for informational purposes.

Town of Windsor 2040 General Plan GHG Reduction Policies

Policy ER-5.1 **Community Greenhouse Gas Reduction.** The Town shall strive to reduce emissions by 25 percent below the 1990 community emissions level by 2020, and further reduce community emissions by:

- 40 percent below the 1990 level by 2030;
- 60 percent below the 1990 level by 2040; and
- 80 percent below the 1990 level by 2050 (New Policy, Town Staff and Consultants).

Policy ER-5.3 **Greenhouse Gas Efficiency Target.** The Town shall ensure that all new development projects and Public Works Improvement projects would result in less than 1.91 metric tons CO_2e per service population (including residents and employees) per year from 2017 to 2030, less than 1.12 metric tons CO_2e per service population per year from 2030 to 2040, and 0.49 metric tons CO_2e per service population per year from 2040 to 2050 in order to ensure that the emissions targets for the years 2030, 2040, and 2050 in ER-5.1 and ER-5.2 would be achieved.

Policy ER-5.4 **Encourage Development Patterns that Reduce Greenhouse Gas Emissions.** The Town shall strive to reduce greenhouse gas emissions by encouraging compact, mixed-use, pedestrian/bicycle friendly, transit-oriented development that reduces Vehicle Miles Traveled (VMT); promoting energy efficient building enhancements, construction practices, design, and site planning; improving the job-to-housing ratio;

[90] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Website: https://www.townofwindsor.com/DocumentCenter/View/21498/Final-Town-of-Windsor-2040-General-Plan_2018-06-04. Accessed July 8, 2022.
[91] Ibid.

and other methods of reducing greenhouse gas emissions while maintaining a balance of housing types.

Policy ER-5.8 **Energy Conservation and Efficiency Programs.** The Town shall promote energy conservation/energy efficiency improvement programs for residential and commercial properties such as those offered by Sonoma County Energy Independence Program (SCEIP) and Property Assessed Clean Energy (PACE), that reduce energy demand which contribute to background levels of regional air emissions and GHG emissions.

Policy ER-5.10 **Energy Performance Standards.** The Town shall require new construction to meet targeted energy performance standards to advance Town greenhouse gas reduction and other sustainability goals and policies identified in the General Plan. The Town will allow new development to select from a range of options to achieve a minimum energy performance standard, including but not limited to:

- solar easements to guarantee access to increased renewable energy generation;
- installation of EV charging stations in homes and in commercial development to increase the ability for the public to use zero-emission vehicles;
- passive heating and cooling building design;
- solar roof and carport panels;
- cool roofs;
- smart appliances;
- wind generation;
- installation of energy efficient appliances and fixtures; and
- other emerging technologies as they become available.

The Town shall work with affordable housing developers to assist in meeting the energy performance standards.

Policy ER-5.11 **Zero-Net-Energy Goals.** The Town shall strive to implement the State goal of zero-net-energy (ZNE) in all new residential construction by 2020 and ZNE in all new commercial construction by 2030.

Policy ER-5.14 **Compliance with Energy Regulations.** The Town shall continue to enforce State energy regulations governing energy consumption and use of solar and other renewable energy resources in existing and new development.

Town of Windsor 2040 General Plan GHG Reduction Policy Consistency

The proposed project is a mixed-use development that would encourage residents to use on-site facilities, thereby reducing potential VMT generation. The proposed project would include on-site solar and would achieve zero net electricity in addition to being required to meet all State standards for building efficiency. The proposed project would include a minimum of five EV-ready parking stalls capable of accommodating the future installation of Level 2 EV charging stations that would serve residents, employees, and visitors. Additionally, the proposed project would include sidewalks and

pedestrian infrastructure, as well as long-term and short-term bicycle parking, throughout the project site for resident, employee, and customer use. While the GHG emissions reduction policies of the General Plan are not used as the basis of this analysis, it is noted that the proposed project would not conflict with these policies.

Town of Windsor 2040 General Plan Land Use Designation Consistency

As previously mentioned, the proposed project would be considered to conflict with the Town's qualified GHG reduction strategy, the General Plan, if it were to conflict with the General Plan land use designation for the project site. As discussed in Section 2.3, Air Quality, the General Plan designates the northern portion of the project site as High Density Residential and the southern portion of the project site as Boulevard Mixed Use (Exhibit 4). Both the High Density Residential and Boulevard Mixed Use designations allow for multi-family housing with a density range of 16 to 32 dwelling units per acre. The Boulevard Mixed Use designation also specifies a maximum FAR of 2.0.[92] The proposed project would develop 173 multi-family dwelling units on a 5.92-acre lot, which equals an average of 30 units per acre, consistent with the maximum allowable housing density of the existing land use designation. In addition, the proposed project would constitute an overall FAR of 0.98, which is below the maximum allowable FAR of 2.0. As neither the maximum allowable residential density nor the maximum allowable FAR of the existing land use designations are exceeded by the proposed project, the proposed project would be consistent with the General Plan land use designation for the project site. Therefore, GHG emissions generated by the proposed project would be within the estimated inventory for the project site as accounted for in the Town's qualified GHG reduction strategy, and the proposed project would be consistent with the Town's qualified GHG reduction strategy. Therefore, this impact would be less than significant.

Mitigation Measures

None.

[92] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Website: https://www.townofwindsor.com/DocumentCenter/View/21498/Final-Town-of-Windsor-2040-General-Plan_2018-06-04. Accessed July 8, 2022.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.9 Hazards and Hazardous Materials *Would the project:*				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Environmental Evaluation

Setting

Hazards analyzed in this section include hazardous materials, wildfires, and hazards based on proximity to airport and airstrip operations. Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed of, or otherwise managed.

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater that have concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20–24 contain technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

The analysis of potential hazardous material impacts relies primarily upon a Phase I Environmental Site Assessment (Phase I ESA) prepared by EBA Engineering (EBA) on February 23, 2021, and a Limited Phase II ESA prepared by EBA on September 1, 2022 (Appendix G).

The project site originally supported agricultural uses dating back to at least 1933. A trucking company occupied the project site from 1990 to 1999, consisting of cars, trucks, containers, and a residential building with a detached barn and several outbuildings. All buildings and structures were demolished in 2006, and the site is now vacant. [93]

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 activities would potentially require the routine transport, use, and disposal of small amounts of hazardous materials such as fuels, paints, or solvents, which are required during construction. Operational transport, use, or disposal of hazardous substances would be limited to small quantities for household uses. During construction and operation, the proposed project would be required to comply with all applicable local, State, and federal safety codes and regulations related to transporting, using, or disposing hazardous materials, including Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); federal Clean Air Act; and the Occupational Safety and Health Administration (OSHA) that regulates worker safety hazards. Construction activities that involve hazardous materials would be governed by several agencies, including Cal/EPA, California Department of Transportation (Caltrans), California Division of Occupational Safety and Health (Cal/OSHA), Department of Toxic Substances Control (DTSC), and the Sonoma County Department of Health Services-Environmental Health and Safety Division, as well as applicable local regulations. Compliance with the provisions of these agencies would ensure that the routine transport, use, or disposal of hazardous materials does not create a significant hazard to the public. Therefore, impacts would be less than significant.

[93] EBA Engineering. 2021. Phase I Environmental Site Assessment.

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 with mitigation incorporated. According to the Phase I ESA, the project site was formerly planted with orchards from the 1940s to the 1960s, meaning agricultural chemicals could have been used and stored on the project site. However, any residual agricultural chemicals in shallow site soils would not be expected to be present at hazardous quantities that would prompt regulatory enforcement action or pose a significant threat to human health or the environment, given the amount of time that has passed. Application of pesticides in accordance with applicable laws and labeling requirements is generally considered an acceptable agricultural practice. Published information indicates that application of pesticides to row crops does not result in the application of chemicals that would constitute a Recognized Environmental Condition (REC). Pesticide accumulation in near-surface soils is not generally considered a soil contamination problem requiring cleanup, as long as their application is conducted in accordance with applicable laws and labeling requirements. As such, this is considered a *de minimis* condition. By definition, *de minimis* conditions do not present a material risk of harm to public health or the environment and generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

EBA did not observe any evidence of distressed vegetation or other environmental concerns related to this historical project site use at the time of the site reconnaissance. Furthermore, in January 2018, a total of 12 near-surface discrete soil samples were collected and analyzed for residual agricultural chemicals at the project site. No chemicals of concern were reported at concentrations exceeding their respective regulatory screening levels.

Water Supply Well

EBA observed what appeared to be an abandoned water supply well at the southern portion of the project site, which has the potential to contain hazardous materials. EBA recommends that the well be capped and sealed, or properly abandoned. Therefore, the well would be capped and sealed, or properly abandoned in accordance with State and local guidelines.

Recognized Environmental Condition-Underground Storage Tank

The project site is listed on environmental databases for having a registered underground storage tank (UST). However, no additional information regarding this reported UST was known by past tenants and property owners, nor was it included in any historical sources reviewed by EBA as part of the Phase I ESA, and evidence of a UST was not discovered during surveys conducted at the project site in 2012, 2017, 2018, 2021, or 2022. There is not enough information to confirm whether or not the UST is still present. As such, the Phase I ESA recommends that a soil and groundwater investigation be conducted at the location of the identified fuel hydrocarbon (FHC)-impacted soils and/or groundwater. The Phase I ESA recommends that if the UST or evidence of the UST is encountered during site development, or FHC-impacted soils and/or groundwater are encountered, the appropriate regulatory agencies should be notified, and pertinent steps be taken to remove the UST. This is included as MM HAZ-1.

An REC is defined by American Society of Testing and Materials (ASTM) Standard Practice E1527-21 as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to a release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

The Phase II ESA included the collection soil samples, groundwater samples, and soil vapor samples. The Phase II ESA determined that there does not appear to be an on-site source for the reported soil vapor impacts. A total of six trenches excavated in and around the former trucking company yard did not reveal evidence of former tank pits or UST-related contamination.

Analytical results of soil vapor sampling indicated detections of VOCs above laboratory reporting limits (LRLs), including benzene, toluene, tetrachloroethylene, and chloroform. Benzene was reported at concentrations of 5.21 µg/m^3, and 10.8 µg/m^3, respectively, at the locations of soil vapor probes, both of which exceed the North Coast RWQCB Environmental Screening Levels (ESLs) for Residential Sub-Slab/Soil Gas Cancer Risk of 3.2 µg/m^3. The detections of toluene and tetrachloroethylene were found to be below respective ESLs. Chloroform was reported above LRLs at the locations of soil vapor probes, all of which exceed the ESL of 4.1 µg/m^3. Additional sampling conducted in March 2021, and February and June 2022 indicated that VOCs such as TVH-Hexane, benzene, ethylbenzene, xylenes, naphthalene, vinyl chloride, and chloroform are present above regulatory screening levels for residential land uses as well. The presence of these VOCs above their respective regulatory screening levels represents an REC. No source of this contamination was detected. To protect the health and safety of construction workers, MM HAZ-2 requires implementation of a construction worker health and safety plan.

Based on the conditions described above, EBA recommended that an applicable regulatory agency be consulted as part of future site redevelopment as well as during any future soil vapor mitigation measures.

The applicant contracted a qualified professional to design a vapor mitigation system (VMS) to mitigate the vapor intrusion risk. The VMS was designed based upon the soil vapor samples to provide a significant factor of safety for future building occupants. The VMS would have diffusion rates such that the mitigated human health risk would be approximately 200,000 times lower than regulatory thresholds. In a telephone conversation on April 20, 2022, the North Coast RWQCB concurred with the approach detailed for the proposed VMS plan as an appropriate mitigation measure with respect to human health and safety for future occupants of the proposed project. This telephone conversation was memorialized by the North Coast RWQCB in electronic correspondence dated April 20, 2022. Installation of the VMS is included as MM HAZ-3. Implementation of MM HAZ-3 would make this a de minimis condition.

Low Impact Development (LID) BMPs are permanent, small-scale, site features which aim to mimic the hydrologic function of the predevelopment site by capturing, treating, and infiltrating stormwater as close to the source as possible. In an email correspondence dated May 13, 2022, the North Coast RWQCB indicated that, because soil vapor contamination has been detected across the project site, installation of LID features in contaminated areas of the project site could lead to soil

and/or groundwater contamination. In this case, updates that prevent an increase in infiltration in contaminated areas would have been required. However, pursuant to additional correspondence with the North Coast RWQCB, it was determined that there are no longer concerns regarding the location of LID features at the project site.[94] A soil management plan was requested, which is included as MM HAZ-4.Therefore, these existing conditions would be mitigated to the extent that they would not increase hazards to the public or the environment related to upset and accident conditions involving the release of hazardous materials into the environment.

Additionally, the proposed project would be required to comply with all applicable local, State, and federal safety codes and regulations for the transportation, use, and storage of hazardous materials during construction-related activities that are designed to prevent the accidental release of hazardous materials into the environment. Although construction of the proposed project could potentially result in the use of hazardous materials, quantities of these materials would not be significant enough to pose a substantial risk to the public or the environment. Once operational, the proposed project would not use or store large quantities of hazardous materials. Compliance with existing regulations outlined in the General Plan and Municipal Code would ensure that the proposed project does not create a significant hazard to the public or the environment through upset or accident conditions. Therefore, impacts would be less than significant with mitigation incorporated.

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

No impact. The closest school to the project site is Mattie Washburn Elementary, 1.10 miles north of the project site. Therefore, the proposed project would not operate within 0.25-mile of an existing or proposed school.

In addition, as described under Impact 2.9(a), project construction and operation would involve minor routine use of hazardous substances such as diesel fuels, lubricants, pesticides, and fertilizers. Operational transport, use, or disposal of hazardous substances would be limited to small quantities for household uses. During construction and operation, the proposed project would be required to comply with all applicable local, State, and federal safety codes and regulations related to transporting, using, or disposing hazardous materials, including RCRA; CERCLA; federal Clean Air Act; and OSHA that regulates worker safety hazards. Construction activities that involve hazardous materials would be governed by several agencies, including Cal/EPA, Caltrans, Cal/OSHA, DTSC, and the Sonoma County Department of Health Services-Environmental Health and Safety Division, as well as applicable local regulations. Therefore, no impact would occur.

[94] Bauer, Heidi M., PG, Senior Engineering Geologist, Site Cleanups Unit Supervisor. Personal communication: Email Correspondence. August 3, 2022.

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. The Phase I ESA evaluation included a search of federal, State, and local databases kept on hazardous material sites, including the State's Cortese list maintained in accordance with Government Code Section 65962.5. The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.[95] Other hazardous substances that may be encountered during project construction are described in Impact 2.9(b). According to the Phase I ESA, the project site is listed on environmental databases for having a registered UST. As such, the Phase I ESA recommends that a soil and groundwater investigation be conducted at the location of the identified FHC-impacted soils and/or groundwater. The Phase II ESA included the collection soil samples, groundwater samples, and soil vapor samples. The Phase II ESA determined that there does not appear to be an on-site source for the reported soil vapor impacts. A total of six trenches excavated in and around the former trucking company yard did not reveal evidence of former tank pits or UST-related contamination. Therefore, 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 or excessive noise for people residing or working in the project area?

No impact. The nearest public airport to the project site is the Charles M. Schulz Sonoma County Airport, approximately 1.5 miles southwest of the project site, just outside the Town. The project site is not within the Charles M. Schulz Sonoma County Airport safety zones and, as a residential project of no more than 60 feet in height, it would not create a safety hazard nor would it be a source of excessive noise for people residing or working in the area.[96] No impact would occur.

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

Less than significant impact. The project site is located in evacuation zone WI-D. In the event of an evacuation, residents of the project site could travel either east or west on Shiloh Road outside the Town. If they travel east on Shiloh Road, they could also exit the Town by going south on Old Redwood Highway. If they travel west on Shiloh Road, they could exit the Town by traveling either north or south on US-101.[97] The proposed project would not modify any existing roadways in a way

[95] Department of Toxic Substances Control (DTSC). Envirostor. 2021 Hazardous Waste and Substances Site List. Website: https://www.envirostor.dtsc.ca.gov/public/search.asp?page=1&cmd=search&business_name=&main_street_name=&city=&zip=&county=&status=ACT%2CBKLG%2CCOM&branch=&site_type=CSITES%2COPEN%2CFUDS%2CCLOSE&npl=&funding=&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST&reporttype=CORTESE&federal_superfund=&state_response=&voluntary_cleanup=&school_cleanup=&operating=&post_closure=&non_operating=&corrective_action=&tiered_permit=&evaluation=&spec_prog=&national_priority_list=&senate=&congress=&assembly=&critical_pol=&business_type=&case_type=&searchtype=&hwmp_site_type=&cleanup_type=&ocieerp=&hwmp=False&permitted=&pc_permitted=&inspections=&inspectionsother=&complaints=&censustract=&cesdecile=&school_district=&orderby=upper%28business%5Fname%29. Accessed March 16, 2022.

[96] Sonoma County. Airport Safety Zones Charles M. Schulz - Sonoma County Airport. Website: https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Comprehensive-Airport-Land-Use/Sonoma-County-Airport/. Accessed March 16, 2022.

[97] Town of Windsor. May 2021. Windsor Evacuation Zone WI-D Possible Evacuation Routes.

that would impede emergency access or evacuation. In addition, all project site access driveways would be designed to meet requirements for emergency vehicle use and access, and would range from 20 to 27 feet in width. Therefore, impacts would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less than significant impact. The project site is not located within a fire hazard zone or wildland urban interface zone as designated by the California Department of Forestry and Fire Protection (CAL FIRE).[98] The proposed project is in an urban area and is surrounded by urban development and infrastructure. These land use types typically are not associated with wildland fires and usually preclude the possibility of exposure of such threats. However, recent wildfire events in Sonoma County near the Town have demonstrated that even urban areas are vulnerable to wildfires, particularly those close to undeveloped areas.

Projects are reviewed by the Windsor Fire Protection District for compliance with the California Fire Code, adopted and amended by the Town, and with National Fire Protection Association regulations. The proposed project is expected to comply with the 2021 California Building and Fire Codes as adopted and amended by the Town, which are designed to reduce potential fire hazards to the most current standards. As discussed under Impact 2.9(f), access to the project site is designed to facilitate the arrival of emergency vehicles and evacuation of the project site if necessary. Compliance with the Town's adopted building and fire codes plus street standards would, to the extent possible, reduce potential impacts from wildfires to less than significant.

Mitigation Measures

MM HAZ-1 In the event that the underground storage tank (UST) or evidence of the UST is encountered during site development, or fuel hydrocarbon (FHC) impacted soils and/or groundwater are encountered, the appropriate regulatory agencies, such as the California Department of Toxic Substances (DTSC), shall be notified, and pertinent steps be taken to remove the UST in accordance with State and federal regulations.

MM HAZ-2 Prior to issuance of grading and construction permits, the project applicant shall prepare a construction worker health and safety plan and submit to the North Coast Regional Water Quality Control Board (North Coast RWQCB) and the Town for review and approval.

MM HAZ-3 Prior to issuance of a building permit, the vapor mitigation system (VMS), as designed by GeoKinetics and approved by the North Coast Regional Water Quality Control Board (North Coast RWQCB, shall be incorporated into the project plans submitted to the Town. The VMS shall be installed during construction of the proposed project and remain active during project operation.

[98] California Department of Forestry and Fire Protection (CAL FIRE). 2022. CAL FIRE FRAP Fire Hazard Severity Zone (FHSZ) Viewer. Website: https://egis.fire.ca.gov/FHSZ/. Accessed June 15, 2022.

MM HAZ-4 Prior to issuance of grading and construction permits, the project applicant shall prepare a soil management plan and submit to the North Coast Regional Water Quality Control Board (North Coast RWQCB and the Town for confirmation.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.10 Hydrology and Water Quality *Would the project:*				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Environmental Evaluation

Setting

The site-specific information and analysis in this section is drawn from the Initial Storm Water LID Plan dated June 25, 2021, and the Initial Hydrology and Hydraulics Study conducted dated June 28, 2021, both of which were conducted by Carlile Macy (Appendix H).

There are five major creeks that flow through the Town: Windsor Creek, East Windsor Creek, Pool Creek, Pruitt Creek, and Starr Creek. The closest waterway to the project site is Pruitt Creek, a tributary to Pool Creek, located approximately 0.23 mile south of the project site.

Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than significant impact. During construction activity, runoff carrying eroded soils and pollutants could enter storm drainage systems and enter nearby waterbodies, increasing sedimentation and degrading downstream water quality. The sediments could also seep into the associated groundwater table. This would represent a potentially significant construction impact related to surface and groundwater quality.

The Municipal Code contains requirements for new development and redevelopment projects to minimize pollutants in stormwater runoff. These requirements include BMPs, such as erosion control, revegetation, stream setbacks, and parking lot cleaning, which are detailed in the Town's Phase II NPDES Storm Water Management Plan. Municipal Code Title IX, Chapter 4 includes stormwater discharge requirements designed to achieve compliance with the North Coast RWQCB's NPDES permit and Waste Discharge Requirements (WDRs) for Municipal Separate Storm Sewer System (MS4) Discharges (Order No. R1-2015-0030; NPDES No. CA0025054). Discharges to the Town's stormwater conveyance system that would not be covered by the MS4 general NPDES permit would be required to obtain coverage under an individual NPDES permit or comply with individual WDRs, as approved by the North Coast RWQCB.

Under the NPDES General Construction Permit (Order No. R1-2009-0050), projects that disturb one or more acres of land are required to obtain a permit before the start of construction activity. Accordingly, the proposed project would be required to prepare and implement a SWPPP during construction in accordance with federal and State requirements. The SWPPP would identify structural and non-structural BMPs intended to prevent erosion during construction. Although construction activities have the potential to generate increased sedimentation, compliance with applicable policies and regulations would minimize the potential to degrade water quality in downstream water bodies to the maximum extent possible. As a result, construction-related project impacts related to surface and groundwater quality would be less than significant.

The proposed project incorporates several features to preserve water quality, including a 9,821-square-foot rain garden at the northern end of the project site, that would provide sufficient capacity to capture stormwaters and meter them into local waterways to ensure no net increase in off-site flow; interceptor trees along Business Park Court and within parking lots; infiltration areas to accept runoff from project rooftops; and permeable pavements within the westerly EVA designed to support EVA via Hembree Road. Per the Storm Water LID Plan, these measures would reduce the total tributary area used for treatment calculations. Runoff would be treated by bioretention measures and trash would be removed by trash baskets within each inlet structure to reduce pollution prior to being discharged from the project site.

The design of the proposed storm drain system is in conformance with the Sonoma County Water Agency's Flood Control Design Criteria. The underground storm drain system can convey the 100-year storm below ground, and an overflow route is available for runoff exceeding the 100-year

storm. Any storm below a 100-year storm would be captured by one of the three proposed detention systems and metered to flows mimicking pre-existing site conditions. The proposed project would achieve 100 percent volume capture and 100 percent of the runoff generated by the proposed project, once developed, would be treated. Therefore, construction and operation-related project impacts would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than significant impact. The project site does not contain any active groundwater wells nor are any proposed. While an abandoned water supply well is located at the southern portion of the project site, it is not currently in use and would be capped and sealed, or properly abandoned in accordance with State and local guidelines as part of the proposed project.

The Windsor Water District would provide potable water to the project site. According to the 2015 Urban Water Management Plan (2015 UWMP) for the Windsor Water District, groundwater consists of approximately 2.7 percent of the District's total water supply.[99]

The development of the proposed project would result in an increase in impervious surfaces, which would reduce the available recharge area for local groundwater aquifers. However, the proposed project would include a 9,821-square-foot rain garden at the northern end of the project site, that would provide sufficient capacity to capture and meter stormwater into local waterways to ensure no net increase in off-site flow. The proposed project design would also direct runoff from project rooftops to infiltration areas, and would incorporate permeable pavements within the westerly EVA via Hembree Road. As such, project impacts on groundwater 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 or through the addition of impervious surfaces, in a manner which would:

(i) 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. Although the proposed project would not alter the course of any streams or rivers, it would be required to implement a SWPPP as part of its Construction General Permit to ensure that erosion and siltation are prevented or minimized to the maximum extent feasible during construction. Grading and construction may temporarily alter stormwater flow patterns; however, compliance with Final Stormwater LID, NPDES permit conditions, and the applicable provisions of the Municipal Code would lessen impacts related to erosion or siltation during construction.

As discussed above, the project includes a storm drain system that would capture and retain stormwaters to ensure no net increase in flow from pre-project conditions. The proposed storm drain system is in conformance with the Sonoma County Water Agency's Flood Control Design

[99] Town of Windsor. 2016. Final 2015 Urban Water Management Plan for the Town of Windsor Water District. Website: https://www.townofwindsor.com/DocumentCenter/View/21109/UWMP-Final-2015. Accessed May 6, 2022.

Criteria. The underground storm drain system can convey the 100-year storm below ground, and an overflow route is available for runoff exceeding the 100-year storm. Any storm below a 100-year storm would be captured by one of the three proposed detention systems and metered to flows mimicking pre-existing site conditions. Therefore, impacts would be less than significant.

(ii) 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. According to the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL), the project site is not located within an area with flood risks.[100] The existing site is almost completely composed of pervious surfaces. The development of the proposed project would result in an increase in impervious surfaces, which would increase surface runoff. However, the storm drain system that would capture and retain stormwaters to ensure no net increase in flow from pre-project conditions. The proposed storm drain system is in conformance with the Sonoma County Water Agency's Flood Control Design Criteria. The underground storm drain system can convey the 100-year storm below ground, and an overflow route is available for runoff exceeding the 100-year storm. Any storm below a 100-year storm would be captured by one of the three proposed detention systems and metered to flows mimicking pre-existing site conditions. Therefore, impacts would be less than significant.

(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less than significant impact. During construction activity, runoff carrying eroded soils and pollutants could enter storm drainage systems and enter nearby waterbodies, increasing sedimentation and degrading downstream water quality. The sediments could also seep into the associated groundwater table. This would represent a potentially significant construction impact related to surface and groundwater quality. Under the NPDES General Construction Permit (Order No. R1-2009-0050), projects that disturb one or more acres of land are required to obtain a permit before the start of construction activity. Accordingly, the proposed project would be required to prepare and implement a SWPPP during construction in accordance with federal and State requirements. The SWPPP would identify structural and non-structural BMPs intended to prevent erosion during construction. Although construction activities have the potential to generate increased sedimentation, compliance with applicable policies and regulations would minimize the potential to degrade water quality in downstream water bodies to the maximum extent possible. As a result, construction-related project impacts related to surface and groundwater quality would be less than significant.

The proposed project would increase impervious surface, substantially alter the landscape, and may affect the existing natural drainage pattern on the project site. However, the proposed project includes a storm drain system that would capture and retain stormwaters to ensure no net increase in flow from pre-project conditions, ensuring that the project-related stormwater runoff would not exceed the capacity of existing or planned storm drainage systems. The proposed storm drain system is in conformance with the Sonoma County Water Agency's Flood Control Design Criteria. The underground storm drain system can convey the 100-year storm below ground, and an overflow

[100] Federal Emergency Management Agency (FEMA). 2021. FEMA National Flood Hazard Layer (NFHL) Viewer. Website: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed May 6, 2022.

route is available for runoff exceeding the 100-year storm. Any storm below a 100-year storm would be captured by one of the three proposed detention systems and metered to flows mimicking pre-existing site conditions. Furthermore, the proposed project would be required to comply with applicable North Coast RWQCB regulations and the Town's regulatory policies pertaining to stormwater runoff. Operational impacts would be less than significant.

(iv) impede or redirect flood flows?

Less than significant impact. The proposed project would affect the existing natural drainage pattern on the project site. According to FEMA's NFHL, the project site is not located within an area with flood risks.[101] According to the Initial Hydrology and Hydraulics Study, the underground storm drain system would be capable of conveying the 100-year storm below ground, and an overflow route is available for runoff exceeding the 100-year storm. Any storm below a 100-year storm would be captured by one of the three proposed detention systems and metered to flows mimicking pre-existing site conditions. Therefore, the proposed project would not impede or redirect flood flows; impacts would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No impact. According to the FEMA NFHL, the project site is not located within an area with flood risks.[102] The majority of the vacant land to the south of the project site is designated as a 100-year flood hazard area or 500-year flood hazard area. The Town is within a dam inundation area.[103] In the unlikely event of dam inundation, the proposed project would not risk release of significant pollutants as no significant amount of hazardous materials would be used or stored on-site given the proposed uses.

A seiche is a seismically or wind-induced wave on an enclosed body of water, such as a lake or reservoir. There are no lakes or reservoirs in the vicinity, so there would be no seiche hazard. The project site is more than 17 miles from the Pacific Ocean, so tsunami inundation is unlikely. For these reasons, the project site would not be subject to inundation and no impact would occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than significant impact. As described in Impact 2.9(a), the Town has requirements for new development and redevelopment projects to minimize pollutants in stormwater runoff to achieve compliance with the North Coast RWQCB's NPDES permit and WDRs for MS4 Discharges. Project impacts related to runoff would be less than significant.

Mitigation Measures

None.

[101] Federal Emergency Management Agency (FEMA). 2021. FEMA National Flood Hazard Layer (NFHL) Viewer. Website: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed May 6, 2022.
[102] Ibid.
[103] Town of Windsor. 2018. Town of Windsor 2040 General Plan.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.11 Land Use and Planning *Would the project:*				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☒	☐	☐

Environmental Evaluation

Setting

Would the project:

a) Physically divide an established community?

No impact. The physical division of an established community would occur if construction of a large linear feature such as a railroad or interstate highway occurred or removal of access that would impact mobility, such as a bridge, occurred. The project site does not currently serve as a linkage between established communities.

The proposed project is designed to be in conformance with the Vision Plan, and as such, the proposed development would implement the type of land uses that have already been contemplated as part of the planning process. Additionally, the proposed project would include improvements to Shiloh Road and Business Park Court that would provide linkages between the uses to the east and west of the proposed project. As such, implementation of the proposed project would not disrupt or divide an established community and no impact would occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than significant impact with mitigation incorporated. As noted, the proposed project would result in the construction of land uses that reflect the intended uses expressed in the Vision Plan, at the appropriate scale and density.

The proposed project would not require any changes to the existing land use designations or zoning. Pursuant to the existing land use and zoning designations, a total of 190 residential units are permitted on-site. The proposed project would construct 173 apartment dwellings.

For multi-family developments, the Zoning Ordinance requires two covered parking stalls per residential unit, one additional parking stall per each bedroom over three, and guest parking stalls at

a ratio of one uncovered parking stall per unit. For general retail stores, the Zoning Ordinance requires one parking stall for each 200 square feet of floor area. Based on the 173 proposed residential units and associated commercial space, the Zoning Ordinance would require 346 covered parking spaces, 173 uncovered guest parking spaces, and 40 parking spaces allocated for the commercial space, for a total of 559 on-site parking spaces.

The proposed project would provide a total of 297 parking spaces, including 257 on-site spaces, 40 off-site spaces, and 144 covered carport spaces. A summary of the proposed parking features is provided in Table 3.

The proposed project would not meet the requirements of the Zoning Ordinance; however, because the proposed project is providing affordable housing units, the project applicant is only subject to required parking ratios pursuant to Government Code Section 65915 (State Density Bonus Law). Government Code Section 65915 provides the following guidance for parking ratios, to be applied to eligible projects:

> " . . . upon the request of the developer, a city . . . .shall not require a vehicular parking ratio, inclusive of parking for persons with a disability and guests . . . that exceeds the following ratios:
>
> (A) Zero to one bedroom: one on-site parking space.
> (B) Two to three bedrooms: one and one-half on-site parking spaces.
> (C) Four and more bedrooms: two and one-half parking spaces.

Based on the direction provided by Government Code 65915, the proposed project would be required to have 217 on-site residential spaces in addition to the 40 spaces required for commercial use, for a total of 257 on-site parking spaces.[104] The proposed project as designed includes a total of 297 parking spaces, which exceeds the 257 spaces that would be required pursuant to Government Code 65915. Therefore, impacts would be less than significant.

Noise Land Use Compatibility

The Town establishes noise and land use compatibility guidelines in the Public Health and Safety Chapter of its General Plan.[105] These guidelines reflect the levels of noise exposure that are generally considered to be compatible with various types of land uses. These standards are shown in Table 16. For a discussion of the characteristics of noise and further information regarding the applicable noise regulatory framework, refer to the Noise impact discussion in Section 2.13 of this Draft IS/MND.

[104] (15 studio apartments*1 parking space/apartment) + (70 1-bedroom apartments *1 parking space/apartment) + (44 2-bedroom apartments *1.5 parking spaces/apartment) + (44 3-bedroom apartments *1.5 parking spaces/apartment) = 217 residential parking spaces + 40 commercial parking spaces = 257 on-site parking spaces.

[105] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Noise Section of Public Health and Safety Chapter. April.

Table 16: Town of Windsor Acceptable Exposure for Community Noise Environments

Land Use Category	Noise Exposure Levels (L_{dn} or CNEL, dBA)			
	Normally Acceptable[1]	Conditionally Acceptable[2]	Normally Unacceptable[3]	Clearly Unacceptable[4]
Residential—Low Density Single-family, Duplex, Mobile Homes	50–55	55–70	70–75	75–85
Residential—Multi-family	50–60	60–70	70–75	75–85
Transient Lodging, Motels, Hotels	50–60	60–70	70–80	80–85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–60	60–70	70–80	80–85
Auditorium, Concert Halls, Amphitheaters	NA	50–65	NA	65-85
Sports Arenas, Outdoor Spectator Sports	NA	50–70	NA	70-85
Playgrounds, Neighborhood Parks	50–70	NA	70–80	80–85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–70	NA	70-85	NA
Office Buildings, Business Commercial and Professional	50–65	65–75	75-85	NA
Industrial, Manufacturing, Utilities, Agriculture	50–70	70–75	75-85	NA

Notes:
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
L_{dn} = day/night average sound level
Land Use Acceptability Interpretation/Conditions:

1 Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involve are of normal conventional construction, without any special noise insulation requirements.

2 Conditionally Acceptable: 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, will normally suffice.

3 Normally Unacceptable: 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.

4 Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Town of Windsor General Plan Public Health and Safety Chapter, Figure 7-4. 201.

The land use category listed in the Town's noise and land use compatibility guidelines that most closely applies to the proposed project is "Residential – Multi-Family." Under this designation, noise environments up to 60 A-weighted decibel (dBA) Community Noise Equivalent Level (CNEL) are considered to be normally acceptable, while noise environments from 60 dBA to 70 dBA CNEL are considered to be conditionally acceptable, for this type of land use. Additionally, the Town requires new residential projects to maintain interior noise levels due to exterior noise sources to 45 dBA CNEL or less.

The dominant noise source in the project vicinity is traffic noise on adjacent roadways. Traffic noise modeling was performed to determine existing and future projected traffic noise levels at the project site. The Federal Highway Administration (FHWA) highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate existing and cumulative traffic noise conditions in the vicinity of the project site. The projected traffic noise levels along roadways adjacent to the project site were analyzed to determine compliance with the Town's land use compatibility standards. The daily traffic volumes were obtained from the traffic analysis prepared for the project by GHD.[106] The resultant noise levels were weighed and summed over a 24-hour period in order to determine the CNEL values. The traffic noise modeling input and output files are included in Appendix I of this Draft IS/MND.

Table 17 shows a summary of the traffic noise levels for existing, existing plus project, cumulative no project, and Cumulative Plus Project conditions as measured at 50 feet from the centerline of the outermost travel lane.

Table 17: Traffic Noise Model Results Summary

Roadway Segment	CNEL (dBA) 50 feet from Centerline of Outermost Lane			
	Existing (dBA) CNEL	Existing Plus Project (dBA) CNEL	Cumulative–No Project (dBA) CNEL	Cumulative Plus Project (dBA) CNEL
Shiloh Road–US-101 to Hembree Lane	67.1	67.2	68.3	68.4
Hembree Lane–north of Shiloh Road	65.5	65.5	65.9	66.0
Shiloh Road–Hembree Lane to Business Park Court	65.8	66.0	68.1	68.3
Business Park Court–north of Shiloh Road	49.8	53.7	49.8	53.7
Shiloh Road–Business Park Court to Old Redwood Highway	66.3	66.4	68.7	68.7

Notes:
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
[1] Modeling results do not take into account mitigating features such as topography, vegetative screening, fencing, building design, or structure screening. Rather it assumes a worst-case of having a direct line of site on flat terrain.
Source: FirstCarbon Solutions (FCS) 2022.

Based on the traffic noise modeling results, the highest traffic noise levels along roadway segments adjacent to the project site would occur under Cumulative Plus Project traffic conditions. The modeled roadway segment of Shiloh Road, between Hembree Lane and Business Park Court, is immediately adjacent to the project site. The modeling results in Table 17 show that traffic noise levels along this roadway segment would range up to 68.3 dBA CNEL under Cumulative Plus Project traffic conditions as measured at 50 feet from the centerline of the outermost travel lane. The nearest façade of the proposed multi-family residential facility would be located approximately 65 feet from the centerline of this roadway segment. At this distance, traffic noise levels along this

[106] GHD Consultants. 2022. Shiloh Crossing Project Transportation Study. May.

roadway segment would attenuate to approximately 66 dBA CNEL. These traffic noise levels are within the Town's conditionally acceptable range of 60 dBA to 70 dBA CNEL for new multi-family residential land use developments. Therefore, in accordance with the Town's land use compatibility guidelines, the interior noise levels must be analyzed to determine compatibility ("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.")

Based on the EPA's Protective Noise Levels,[107] with a combination of walls, doors, and windows, standard construction in accordance with building code requirements for multi-family residential developments would provide 25 dBA in exterior-to-interior noise reduction with windows closed and 15 dBA or more with windows open. With windows open, the interior noise levels of the proposed units nearest to and facing Shiloh Road would not meet the State's interior noise standard of 45 dBA CNEL for indoor sleeping areas (i–e., 66 dBA — 15 dBA = 51 dBA). However, inclusion of alternative ventilation systems such as mechanical air conditioning would allow windows to remain closed for prolonged periods of time, sufficiently reducing traffic noise levels to meet the interior noise level standard of 45 dBA CNEL (i.e., 66 dBA – 25 dBA = 41 dBA). Air conditioning units would give an occupant the option of controlling noise by keeping the windows closed. Therefore, implementation of MM LUP-1 would ensure the proposed project would not result in a conflict with the Town's adopted land use-noise compatibility guidelines and would reduce traffic noise impacts to the proposed project to be less than significant.

Mitigation Measures

MM LU-1 To meet the interior noise level standard of 45 A-weighted decibel (dBA) Community Noise Equivalent Level (CNEL), the proposed multi-family residential units shall be supplied with an alternative form of ventilation, such as air conditioning or noise-attenuated passive ventilation systems that would allow an occupant the option of controlling noise by keeping the windows shut (as the interior noise standard would not be met with ventilation controlled by open windows).

[107] United States Environmental Protection Agency (EPA). 1978. 550/9-79-100 Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. November.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.12 Mineral Resources *Would the project:*				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Environmental Evaluation

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. The project site does not support any mineral extraction activities, nor do any known mineral deposits exist on-site. Therefore, implementation of the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State. Therefore, no impacts would occur.

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 does not support any mineral extraction activities, nor do any known mineral deposits exist on-site. Therefore, implementation of the proposed project would not result in the loss of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, no impacts would occur.

Mitigation Measures

None.

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

Environmental Evaluation

Setting

This Noise Impact Analysis has been prepared by FCS to determine the off-site and on-site noise impacts associated with the proposed project.

Based on the new CEQA Appendix G checklist questions, the noise land use compatibility discussion is now contained within the Land Use and Planning discussion (Section 2.11(b)) of this Draft IS/MND.

Characteristics of Noise

Noise is defined as unwanted sound. Sound levels are usually measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of hearing. 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 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 dB or less are only perceptible in laboratory environments. A change of 3 dB 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 CNE), both of which represent how humans are more sensitive to sound at night. In addition, the equivalent continuous sound level (L_{eq}) is the average sound energy of time-varying noise over a sample period and the maximum noise/sound level (L_{max}) occurring over a sample period.

Regulatory Framework

The project site is located within the Town of Windsor. The Town addresses noise in their General Plan,[108] Zoning Ordinance,[109] and Municipal Code.[110]

Town of Windsor General Plan

The General Plan contains noise policies in the Noise section of its Public Health and Safety Chapter. These policies serve as guides for identifying noise levels and reducing or avoiding adverse noise effects on residents.

New developments that would cause the ambient sound level to rise by more than 5 dBA would be required to incorporate conditions or design modifications to reduce the potential increase in the noise environment.

The Town establishes noise and land use compatibility guidelines as discussed and analyzed in Section 2.10, Land Use and Planning.

Town of Windsor Zoning Ordinance

The Town's Zoning Ordinance establishes maximum allowable noise levels for various land uses when measured at any receiving property. For residential land uses, the exterior noise threshold is 55 dBA during daytime hours between 7:00 a.m. and 10:00 p.m., and 50 dBA during nighttime hours between 10:00 p.m. and 7:00 a.m. For commercial land uses, the exterior noise threshold is 65 dBA during daytime hours between 7:00 a.m. and 10:00 p.m., and 55 dBA during nighttime hours between 10:00 p.m. and 7:00 a.m.

If the measured ambient noise level exceeds the applicable noise level standard in any of these categories, the applicable standards shall be adjusted to equal the ambient noise level. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped to allow measurement of the ambient noise level, the noise level measured while the source is in operation shall be compared directly to the applicable noise level standards identified above.

According to Ordinance 27.34.110–Mixed-Use Development, commercial loading areas and refuse storage facilities must be located away from residential units and must be completely screened from

[108] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Noise Section of Public Health and Safety Chapter. April.
[109] Town of Windsor. 2000. Town of Windsor Zoning Ordinance. Chapter 27.20 General Property Development and Use Standards. July.
[110] Town of Windsor. 2019. Windsor Municipal Code, Title VII Building and Housing Section.

view from the residential portion of the project. Where appropriate, the Director may allow the shared use of refuse storage facilities.

Town of Windsor Municipal Code

The Construction Hours Ordinance in Title VII Building and Housing Section 7-1-190 of the Town's Municipal Code restricts construction activities to the hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 8:00 a.m. and 7:00 p.m. on Saturday.

Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than significant impact. A significant impact would occur if the proposed project would generate a substantial temporary or permanent increase in ambient noise levels in the project vicinity in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Short-Term Construction Impacts

A significant impact would occur if construction activities would result in generation of a substantial temporary increase in ambient noise levels, especially one that would result in annoyance or sleep disturbance of nearby sensitive receptors.

Construction-related Traffic Noise

Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. One type of short-term noise impact that could occur during proposed project construction would result from the increase in traffic flow on local streets, associated with the transport of workers, equipment, and materials to and from the project site. The transport of workers and construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the site. Because workers and construction equipment would use existing routes, noise from passing trucks would be similar to existing vehicle-generated noise on these local roadways. Typically, a doubling of the Average Daily Traffic (ADT) hourly volumes on a roadway segment is required in order to result in an increase of 3 dBA in traffic noise levels; which, as discussed in the characteristics of nose discussion above, is the lowest change that can be perceptible to the human ear in outdoor environments. Based on the air quality modeling prepared for this project, project-related construction is expected to generate a maximum of approximately 14 vehicle trips per day. Documented existing traffic volumes on Business Park Court, north of Shiloh Road average 810 trips per day. This is the roadway segment in the project vicinity with the fewest average daily trips. Therefore, project construction trips would not come close to doubling existing trips on any roadway segment in the project vicinity. For this reason, short-term intermittent noise from construction trips would not be expected to result in a perceptible increase in hourly- or daily-average traffic noise levels in the project vicinity. Therefore,

short-term construction-related noise impacts associated with the transportation of workers and equipment to the project site would be less than significant.

Construction Equipment Operational Noise

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. 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.

The site preparation phase, which includes excavation and grading of the site, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery and compacting equipment, such as bulldozers, draglines, backhoes, front loaders, roller compactors, scrapers, and graders. 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.

Construction of the project is expected to require the use of scrapers, bulldozers, water trucks, haul trucks, and pickup trucks. The maximum noise level generated by each scraper is assumed to be 85 dBA L_{max} at 50 feet from this equipment. Each bulldozer would also generate 85 dBA L_{max} at 50 feet. The maximum noise level generated by graders is approximately 85 dBA L_{max} at 50 feet. A characteristic of sound is that each doubling of sound sources with equal strength increases a sound level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, a reasonable worst-case combined noise level during this phase of construction would be 90 dBA L_{max} at a distance of 50 feet from the acoustic center of a construction area. The effect on sensitive receptors is evaluated below.

The closest noise-sensitive receptors to the proposed project site are single-family residences located directly east of the project site. The calculated reasonable worst-case noise levels could result in hourly average noise levels of up to 66 dBA L_{eq}, at the façade of the nearest receiving residential land use when equipment operate at the nearest project boundary for a full hour. However, these reasonable worst-case construction noise levels would occur only periodically throughout the day as construction equipment operate along the nearest project boundaries. However, these noise levels would drop off at a rate of 6 dBA per doubling of distance as the equipment moves over the project site.

The Construction Hours Ordinance in Title VII Building and Housing Section 7-1-190 of the Town's Municipal Code restricts construction activities to the hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 8:00 a.m. and 7:00 p.m. on Saturday. Limiting construction activities to these daytime hours would reduce the effects of noise produced by these activities on

longer-term (daily) ambient noise levels. Assuming the construction activities would occur at most every hour from 7:00 a.m. to 7:00 p.m., estimated reasonable worst-case 24-hour average noise levels from construction activities during the loudest phase of construction would be 59 dBA CNEL. The calculation spreadsheet is provided in Appendix G.

Based on the EPA's Protective Noise Levels,[111] with a combination of walls, doors, and windows, standard construction in accordance with building code requirements for multi-family residential developments would provide 25 dBA in exterior-to-interior noise reduction with windows closed and 15 dBA or more with windows open. During the calculated loudest phase of construction described above, even with windows open, the interior noise levels of the nearest off-site residences would meet the State's interior noise standard of 45 dBA CNEL for indoor sleeping areas (i.e., 59 dBA — 15 dBA = 44 dBA).

Therefore, compliance with the Town's permissible hours of construction, as well as implementing the best management noise reduction techniques and practices outlined in MM NOI-1, would ensure that construction noise would not result in a substantial temporary increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive receptors. Therefore, with implementation of MM NOI-1, temporary construction noise impacts would be reduced to less than significant.

Operational/Stationary Source Noise Impacts

Less than significant impact. A significant impact would occur if operational noise levels generated by stationary noise sources at the proposed project site would result in a substantial permanent increase in ambient noise levels in excess of any of the noise performance thresholds established in the Town's Municipal Code. As noted in the characteristics of noise discussion, 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 the minimum readily perceptible change to the human ear in outdoor environments. Therefore, for purposes of this analysis, an increase of 5 dBA or greater above ambient noise levels or in excess of the Town's noise performance standards would be considered a substantial permanent increase in ambient noise levels. For receiving single-family residential land uses, the Town has established exterior noise performance standard of 50 dBA during nighttime hours and 55 dBA during daytime hours. For receiving commercial land uses, the Town has established exterior noise limits of 55 dBA during nighttime hours and 65 dBA during daytime hours, and interior noise limits of 50 dBA during both nighttime and daytime hours.

The proposed project would generate noise from parking lot activities, which includes people conversing, doors shutting, engine startup, and slow-moving vehicles; and from new exterior mechanical equipment sources, such as mechanical ventilation systems on the proposed multi-family residential uses.

[111] United States Environmental Protection Agency (EPA). 1978. 550/9-79-100 Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. November.

Mechanical Equipment Operations

At the time of this analysis, details were not available pertaining to proposed ground floor mechanical ventilation systems for the proposed project; therefore, a reference noise level for typical mechanical ventilation systems was used. Noise levels from typical residential mechanical ventilation equipment range from 60 dBA to 70 dBA L_{eq} at a distance of approximately 3 feet.

The nearest sensitive receptor to proposed ground floor mechanical ventilation systems are the single-family residences located east of the project site, across Business Park Court. Proposed ground floor mechanical ventilation systems could be located as close as 90 feet from these nearest sensitive receptors. At this distance, noise generated by proposed mechanical ventilation equipment would attenuate to 42 dBA L_{eq}. If proposed mechanical ventilation systems operated for a 24-hour period, the resulting noise level as measured at these nearest receptors would be 49 dBA CNEL. The calculation spreadsheet is included in Appendix G.

These noise levels would not exceed the Town's maximum hourly average exterior noise limits of 50 dBA during nighttime hours and 55 dBA during daytime hours for receiving residential land uses. In addition, these operational noise levels would not exceed the existing traffic noise levels on the segment of Business Court Park that is adjacent to these nearest residences (shown in Table 18 to be 49.8 dBA CNEL as measured at 50 feet from the centerline of the nearest travel lane).

The calculated reasonable worst-case operational noise levels from proposed mechanical ventilation equipment operations would not exceed existing ambient noise levels as modeled at the nearest residential receptor, and would not result in a substantial permanent increase in noise levels in excess of the Town's established standards. Therefore, the impact of mechanical ventilation equipment operational noise levels on off-site sensitive receptors would be less than significant.

Parking Lot Activities

Parking lot activities include vehicles cruising at slow speeds, doors shutting, or cars starting, would generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet. A conversation between two persons at a distance of 3 to 5 feet apart would generate a noise level of 60 dBA L_{eq} at 5 feet, or approximately 40 dBA L_{eq} as measured at 50 feet.

The nearest sensitive receptor to proposed ground floor mechanical ventilation systems are the single-family residences located east of the project site, across Business Park Court. The closest single-family residence is located approximately 120 feet from the acoustic center of the nearest proposed parking area on the project site. At this distance, assuming a minimum of one parking movement per stall per hour, hourly average noise levels associated with daily parking lot activities would be approximately 42 dBA L_{eq} as modeled at this nearest receptor. If these parking lot activities occurred every hour for a 24-hour period, the resulting noise level as measured at these nearest receptors would be 49 dBA CNEL. The calculation spreadsheet is included in Appendix G.

These noise levels would not exceed the Town's maximum hourly average exterior noise limits of 50 dBA during nighttime hours and 55 dBA during daytime hours for receiving residential land uses. In addition, these operational noise levels would not exceed the existing traffic noise levels on the

segment of Business Court Park that is adjacent to these nearest residences (shown in Table 18 to be 49.8 dBA CNEL as measured at 50 feet from the centerline of the nearest travel lane).

The calculated reasonable worst-case operational noise levels from proposed parking lot activities would not exceed existing ambient noise levels as measured at the nearest residential receptor, and would not result in a substantial permanent increase in noise levels in excess of the Town's established standards. Therefore, the impact of noise produced by project-related parking lot activities to off-site sensitive receptors would be less than significant.

Operational/Mobile Source Noise Impacts

Less than significant impact. A significant impact would occur if implementation of the proposed project would result in a substantial increase in traffic noise levels compared with traffic noise levels existing without the project. As noted in the characteristics of noise discussion, 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 the minimum readily perceptible change to the human ear in outdoor environments. Therefore, for purposes of this analysis, an increase of 5 dBA or greater above ambient noise levels would be considered a substantial permanent increase in traffic noise levels.

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate existing and cumulative (year 2040) traffic noise conditions in the vicinity of the project site. The daily traffic volumes were obtained from the traffic analysis prepared for the project by GHD.[112] The resultant noise levels were weighed and summed over a 24-hour period in order to determine the CNEL values. The traffic noise modeling input and output files are included in Appendix G of this Draft IS/MND. Table 18 shows a summary of the traffic noise levels for existing no project, existing plus project, cumulative no project, and Cumulative Plus Project conditions as measured at 50 feet from the centerline of the outermost travel lane.

Table 18: Traffic Noise Model Results Summary

Roadway Segment	CNEL (dBA) 50 feet from Centerline of Outermost Lane					
	Existing No Project (dBA) CNEL	Existing Plus Project (dBA) CNEL	Increase over Existing No Project (dBA) CNEL	Cumulative No Project (dBA) CNEL	Cumulative Plus Project (dBA) CNEL	Increase over Cumulative No Project (dBA) CNEL
Shiloh Road—US-101 to Hembree Lane	67.1	67.2	0.1	68.3	68.4	0.1
Hembree Lane–north of Shiloh Road	65.5	65.5	0.0	65.9	66.0	0.1
Shiloh Road–Hembree Lane to Business Park Court	65.8	66.0	0.2	68.1	68.3	0.2

[112] GHD Consultant. 2022. Shiloh Crossing Project Transportation Study. May.

Roadway Segment	CNEL (dBA) 50 feet from Centerline of Outermost Lane					
	Existing No Project (dBA) CNEL	Existing Plus Project (dBA) CNEL	Increase over Existing No Project (dBA) CNEL	Cumulative No Project (dBA) CNEL	Cumulative Plus Project (dBA) CNEL	Increase over Cumulative No Project (dBA) CNEL
Business Park Court–north of Shiloh Road	49.8	53.7	3.9	49.8	53.7	3.9
Shiloh Road–Business Park Court to Old Redwood Highway	66.3	66.4	0.1	68.7	68.7	0.0

Notes:
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
[1] Modeling results do not take into account mitigating features such as topography, vegetative screening, fencing, building design, or structure screening. Rather it assumes a worst-case of having a direct line of site on flat terrain.
Source: FirstCarbon Solutions (FCS) 2022.

The highest traffic noise level increase with implementation of the project would occur along Business Park Court, on the segment just north of Shiloh Road. Along this roadway segment, the proposed project would result in an increase of 3.9 dBA above noise levels that would exist without the project. This increase is below a 5 dBA increase that would be considered a substantial permanent increase in traffic noise levels compared with traffic noise levels that would exist without the project. Therefore, project-related traffic noise increase impacts on the existing ambient environment in the project vicinity would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact. A significant impact would occur if the project would generate groundborne vibration or groundborne noise levels in excess of established standards. The Town has not adopted criteria for groundborne vibration impacts. Therefore, for purposes of this analysis, the Federal Transit Administration's (FTA) vibration impact criteria are utilized. The FTA has established industry accepted standards for vibration impact criteria and impact assessment. These guidelines are published in its Transit Noise and Vibration Impact Assessment Manual.[113]

Groundborne noise is an effect of groundborne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room, and may also consist of the rattling of windows or dishes on shelves. In general, if groundborne vibration levels are do not exceed levels considered to be perceptible, then groundborne noise levels would not be perceptible in most interior environments. Therefore, this analysis focuses on determining exceedances of groundborne vibration levels.

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects such as the shaking of a building can be notable. When

[113] Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. September.

assessing annoyance from groundborne vibration, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 microinch per second. To distinguish these vibration levels referenced in decibels from noise levels referenced in decibels, 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.

Short-term Construction Vibration Impacts

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 0.201 inch per second (in/sec) PPV at 25 feet from the operating equipment.

The nearest off-site structure to the project site construction footprint where such heavy equipment would operate are the commercial buildings located north of the project site. This nearest off-site structure would be located approximately 65 feet from the nearest construction footprint where the heaviest construction equipment would potentially operate. At this distance, groundborne vibration levels would range up to 0.05 in/sec PPV from operation of the types of equipment that would produce the highest vibration levels. This is well below the FTA's Construction Vibration Impact Criteria of 0.2 in/sec PPV for buildings of non-engineered timber and masonry. Therefore, the impact of groundborne vibration levels on off-site receptors would be less than significant.

Operational Vibration Impacts

The project would not include any permanent noise sources that would expose persons in the project vicinity to groundborne vibration levels that could be perceptible without instruments at any receiving land use in the project vicinity. Therefore, operational vibration impacts on proposed on-site receptors would be less than significant.

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

Less than significant impact. The nearest airport to the project site is the Sonoma County Airport, which is located approximately 1.5 miles southwest of the project site. Because of its distance from the airport runways, and the orientation of the runway relative to the project site, the project site is located outside of the airport's 55 dBA CNEL noise contours. While airport noise would be audible when planes fly over, it would be less than significant. No private airstrips are located within the vicinity of the project site. Therefore, implementation of the project would not expose persons residing or working in the project site to excessive noise levels associated with private airstrip or public airport noise. Less than significant impacts would occur.

Mitigation Measures

MM NOI-1 To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the proposed project:

- 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 such market available 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 the nearest residential land uses.
- The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and establishment reasonable measures necessary to correct the problem. The construction contractor shall visibly post a telephone number for the disturbance coordinator at the construction site.
- The construction contractor shall limit noise producing construction activities to the hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 8:00 a.m. and 7:00 p.m. on Saturday.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.14 Population and Housing *Would the project:*				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental Evaluation

Would the project:

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

Less than significant. The project site has land use designations of High Density Residential and Boulevard Mixed Use. The proposed project would be consistent with this land use designation as discussed in Section 2.11, Land Use and Planning.

The proposed project would develop 173 apartment dwellings, a Community Center, 8,000 square feet of commercial space in two buildings. According to the Department of Finance, the Town has an average of 2.98 persons per household.[114] If all project residents are assumed to relocate from outside the Town, the proposed project would result in a population increase of approximately 515 persons,[115] from 27,855 to 28,370.[116] The Town's Housing Element forecasts a population of 31,100 by the year 2030. Therefore, the projected population growth resulting from the project would be within the project population growth that is forecasted in the Town's Housing Element. The population increase resulting from the project would be within the planned growth for the Town and impacts would be less than significant.

[114] State of California Department of Finance. 2021. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011, 2021 with 2010 Census Benchmark. Website: https://dof.ca.gov/2022/03/15/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2011-2021-with-2010-census-benchmark/. Accessed March 17, 2022

[115] 2.98*173= ~515

[116] State of California Department of Finance. 2021. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011, 2021 with 2010 Census Benchmark. Website: https://dof.ca.gov/2022/03/15/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2011-2021-with-2010-census-benchmark/. Accessed March 17, 2022

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No impact. The project site is currently vacant and does not include existing housing. This precludes the possibility of the proposed project to displace people or housing. No impact would occur.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.15 Public Services *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

Setting

Information in this Section is based on correspondence with the Sonoma County Fire District (Fire District), the Windsor Police Department, the Town of Windsor Parks and Recreation Department, the Windsor Unified School District, and the Windsor Regional Library.

On May 16, 2022, FCS sent the Fire District, the Windsor Police Department, the Town of Windsor Parks and Recreation Department, the Windsor Unified School District (WUSD) and the Windsor Regional Library letters requesting information about their ability to serve the proposed project.

Fire Protection Services

The Sonoma County Fire District provides fire protection services to the Town. The Fire District operates out of 10 fire stations. The nearest fire station to the project site is County Station No. 1 located at 8200 Old Redwood Highway, 1.18 miles northwest of the proposed project site, and is staffed by five firefighters.[117] Station No. 1 is equipped with resources including one engine, one truck, and one water tender. County Station No. 3, located at 8600 Windsor Road, is 1.93 miles northwest of the project site.[118]

Police Services

Law enforcement services are provided by the Windsor Police Department, which is staffed by Sonoma County Sheriff's Department employees as part of a mutual aid contract between Sonoma County and the Town. Law enforcement services provided by the Department include patrol duties, traffic enforcement, special event security, investigative services, provision of school resource officers, and a K9 unit.[119] The Windsor Police Department is located at 9291 Old Redwood Highway,

[117] Foreman, Cyndi. Division Chief, Fire Marshal. Personal communication: Email Correspondence. June 14, 2022.
[118] Sonoma County Fire District. 2022. Apparatus. Website: https://www.sonomacountyfd.org/apparatus. Accessed June 14, 2022.
[119] Town of Windsor. Police Department. Website: https://www.townofwindsor.com/174/Police-Department. Accessed June 13, 2022.

Suite 300 and is currently staffed by one Police Chief, three Sergeants, 17 deputies, and three civilian staff members.

Schools

The WUSD includes two elementary schools, two middle schools, and four academies or consortiums, including the North Bay Met Academy, the Cali Calmecac Language Academy, Windsor Oaks Academy, and the North County Consortium.

Parks

The nearest park to the project site is Esposti Park located at 6000 Old Redwood Highway, approximately 0.29 mile east of the project site. Esposti Park amenities include a large baseball diamond, a small softball field, restrooms, and parking. Shiloh Ranch Regional Park is located approximately 2 miles east of the project site.

Environmental Evaluation

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?

Less than significant impact. The proposed project would develop 173 apartment dwellings, a Community Center, and 8,000 square feet of commercial space in two buildings. According to the Department of Finance, the Town has an average of 2.98 persons per household. As a conservative assumption, FCS assumes that all project residents would relocate from outside the Town, and the proposed project would result in a population increase of approximately 515 persons. This increase in population can reasonably be expected to produce an increase in demand for fire protection services.

As described in Section 2.14, Population and Housing, the increase in the population is growth that has been planned for by the Town as forecasted in the Town's Housing Element. Further, the project applicant would be required to pay the necessary development impact fees for fire prevention, per Municipal Code, Title VI Fire Prevention and Protection.[120] As described above, FCS sent a letter to SOCO Fire on May 16, 2022. On June 14, 2022, FCS received a response. General Plan Policy PFS-7.2 states that the Town shall strive to maintain a 5-minute fire suppression response time throughout its Sphere of Influence (SOI). The letter states that the current average response time for emergency calls for service is current 3 to 6 minutes. The letter also states that SOCO Fire does not foresee any impacts on its ability to provide fire protection services as a result of the proposed project. In

[120] Town of Windsor. 2022. Town of Windsor Code of Ordinance, Title VI: Fire Prevention and Protection, Chapter 1, Article 3, 6-1-305: Fees and Charges.

September 2021, the Town Council established fire impact fees to finance additional fire facilities.[121] Therefore, impacts would be less than significant.

b) Police protection?

Less than significant impact. As described above, FCS sent a letter to the Windsor Police Department on May 16, 2022. On May 25, 2022, the Police Department responded, saying that the Police Department currently has an average response time to priority calls for service of 5 minutes and 55 minutes. The letter also states that the current officer ratio is 0.73 officers to 1,000 residents, while the target ratio is 1.0 officers per 1,000 residents. However, the letter states that the Police Department does not expect the proposed project to impact the Department's ability to provide law enforcement services.[122] Therefore, impacts associated with police protection services are considered to be less than significant.

c) Schools?

Less than significant impact. FCS sent a letter to the WUSD on May 16, 2022. On July 11, 2022, the WUSD responded stating that the WUSD's current enrollment is 4.533 students, while the total capacity from permanent facilities throughout the WUSD is 5,458 students.[123] However, some grades, such as Transitional Kindergarten (TK), have less available capacity. Per State mandate, school districts will be required to serve four-year-old students in TK by the 2025-2026 school year. Described in Section 2.14, Population and Housing, the increase in the population is growth that has been planned for by the Town as forecasted in the Town's Housing Element. The student generation rate identified by the WUSD for affordable housing is 0.973 students per housing unit. Given that the project proposes 173 new housing units, the proposed project is expected to generate approximately 163 new students. Therefore, the proposed project could result in the need for additional district resources. However, the WUSD stated it is currently in a decreasing enrollment pattern and has existing capacity to serve the proposed project, with the exception of TK students.

The correspondence identifies other long-range considerations. For example, population demographics are cyclical, and an increase in the housing stock, especially of affordable housing units, will increase the potential student population of the WUSD. When the existing housing stock again contains as many students as the WUSD has enrolled in the past, and additional students also reside in newly constructed units, the WUSD's existing school facilities may not be able to accommodate all students. Furthermore, the WUSD is in the process of assessing the ancillary facilities (gymnasiums, cafeterias, libraries, restrooms, outdoor space and playgrounds, administration, etc.) at its school sites to determine their adequacy for the enrollment levels on each site. Should any sites have ancillary facility needs, the addition of more students from residential development will compound this need. However, these issues will need to be addressed at the Town level in response to population growth projected by the General Plan.

[121] Town of Windsor. September 1, 2021. Resolution No. 3696-21.
[122] Percy, James. Administrative Sergeant. Personal communication: Email Correspondence. May 25, 2022.
[123] Decker, Jeremy. Superintendent. Personal communication: Email Correspondence. July 11, 2022.

Furthermore, to help offset the construction or expansion of facilities, the procurement of equipment, and the hiring and training of additional personnel, the WUSD collects mandatory school facility fees on new development projects in accordance with SB 50 and related State laws. As part of the project entitlement process, the project applicant would be responsible for paying its fair share of these school facility fees in accordance with applicable laws. As such, while the proposed project would result in additional school-age children, mandatory development fees would help offset potential impacts related to capacity and budget. Therefore, impacts would be less than significant.

d) Parks?

Less than significant impact. The General Plan Park Dedication Policy PFS-9.12 specifies a target service level of 2.5 acres of community parks and 2.5 acres of neighborhood park space per 1,000 residents. Based on the Town's 2021 population of 27,855, approximately 69 acres of community park space and 69 acres of neighborhood park space (138 acres in total) would be necessary to satisfy the Town's target service.[124,125] It is estimated that the Town's population would be approximately 28,370 given development of the proposed project, requiring approximately 142 park acres as a result.[126] The Town currently maintains 110 acres of park space, falling below its target service level.

As described above, FCS sent a letter to the Town of Windsor Park and Recreation Department on May 16, 2022. FCS received a response on May 31, 2022, stating that the Town expects that existing parks can accommodate any increase in use as a result of the proposed project. The Town of Windsor Fee Schedule details fees due for park, recreation, new trail, open space, and public facilities development based upon the development type and number of dwelling units.[127] The payment of mandatory park fees would ensure the Town can continue to provide park and recreation facilities as population increases. Therefore, with the payment of in-lieu park fees, impacts to parks would be less than significant.

e) Other public facilities?

Less than significant impact. The nearest public library to the project site is the Windsor Regional Library, located at 9291 Old Redwood Highway, Building 100, approximately 2.13 miles northwest of the project site. The Windsor Regional Library is one of 12 regional libraries in the Sonoma County Library System and serves as a "home" library for 4,280 library cardholders.

FCS sent a letter to the Windsor Regional Library on May 16, 2022. FCS received a response on May 26, 2022. The Windsor Regional Library estimates that 173 new residential units may result in 120 additional library users, translating to an approximately 2.5 percent increase in library usage. The response stated that the Town needs to expand library facilities to better serve the town. However, it also stated that the estimated that the 2.5 percent growth in projected library usage would have

[124] State of California Department of Finance. 2021. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011, 2021 with 2010 Census Benchmark. Website: https://dof.ca.gov/2022/03/15/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2011-2021-with-2010-census-benchmark/. Accessed March 17, 2022.
[125] 27,855 persons*(2.5 community park acres /1,000 persons + 2.5 neighborhood park acres/1000 persons) = ~138 park acres
[126] 28,370 persons*(2.5 community park acres/1,000 persons +2.5 neighborhood park acres/1000 persons) = ~142 park acres
[127] Jon Davis, Parks and Recreation Director. Personal Communication: Email Correspondence. May 31, 2022.

minimal impact on services, as library usage has already exceeded the current library facilities.[128] Therefore, with the impacts to other public facilities, such as libraries, would be less than significant.

Mitigation Measures

None.

[128] Phil Hoeft, Regional Branch Manager of Windsor Regional Library. Personal Communication: May 26, 2022.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.16 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Environmental Evaluation

Setting

The Town maintains six community parks totaling 67.5 acres and 14 neighborhood parks totaling 42.5 acres. In total, the Town maintains 110 acres of community and neighborhood parks spaces. Regional parks are provided by the Sonoma County Regional Parks District. Regional parks near Windsor include Foothill, Shiloh Ranch, and Riverfront Regional Parks, totaling 1,356 acres. In addition, the Town has a Joint Use Master Agreement with the WUSD, which provides shared use of Town Facilities and District Facilities. The joint use school sites total 35.8 acres. The nearest park to the project site is Esposti Park, located approximately 0.29 mile east of the project site. The 10-acre park consists of a picnic area, barbecue grills, a hardball field, a soccer field, a softball field, an open grass area, and a horseshoe pit.[129]

Park Dedication Policy PFS-9.12 indicates Windsor should provide 2.5 acres of neighborhood parks and 2.5 acres of community parks and special recreation facilities per 1,000 residents.[130] According to the Department of Finance, the Town's population was approximately 27,855 persons as of 2021.[131] Based on the Town's population, it would need approximately 69 acres of community park space and 69 acres of neighborhood park space (138 acres in total) to fulfill the Park Dedication Policy. As a result, the Town's existing 110 acres does not currently meet this standard.

[129] Town of Windsor. 2017. Parks & Recreation Master Plan Update. Website: https://www.townofwindsor.com/DocumentCenter/View/20228/2017-06-07-Windsor-PRMP-Low-Reso?bidId=. Accessed March 17, 2022.
[130] Town of Windsor. 2018. Town of Windsor 2040 General Plan.
[131] State of California Department of Finance. 2021. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011, 2021 with 2010 Census Benchmark. Website: https://dof.ca.gov/2022/03/15/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2011-2021-with-2010-census-benchmark/. Accessed March 17, 2022

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. The proposed project would construct 173 apartment dwellings, a Community Center, 8,000 square feet of commercial space in two buildings. Recreational amenities would include a fitness room, a meeting/activity/teen room with a kitchenette, a barbecue and dining area, a play structure, a bocce court, a seating area and firepit, and a swimming pool with lounge space. These amenities would reduce the additional demand for park facilities associated with the proposed project. In addition, the proposed project is subject to payment of development impact fees, a portion of which applies directly to park and recreational facilities that would allow the Town to provide new recreational opportunities. Payment of development impact fees would also ensure that increased demand for recreational facilities would not result in substantial physical deterioration of such amenities. Therefore, impacts 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. The proposed project would construct 173 apartment dwellings, a Community Center, 8,000 square feet of commercial space in two buildings. Recreational amenities would include a fitness room, a meeting/activity/teen room with a kitchenette, a barbecue and dining area, a play structure, a bocce court, a seating area and firepit, and a swimming pool with lounge space. Besides the recreational facilities provided as part of the proposed project, the construction of which would abide by applicable mitigation as set forth in this Draft IS/MND, no other recreational facilities would be developed. The construction of any additional recreational facilities by the Town is unknown at this time and would be subject to separate environmental review under CEQA. Accordingly, the proposed project would not result in the construction or expansion of recreational facilities, which might have adverse physical effects on the environment. Impacts would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.17 Transportation *Would the project:*				
a) Conflict with a program plan, ordinance or policy of the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

Environmental Evaluation

Setting

The following analysis is based on the Traffic Impact Study (TIS) dated June 15, 2022, prepared by GHD and included in Appendix H.

Changes to the CEQA Guidelines were adopted in December 2018 to implement SB 743. Guideline 15064.3, which describes criteria for evaluating a project's transportation impacts, provides that VMT is generally "the most appropriate measure of transportation impacts," and that except for roadway capacity projects, a project's effect on traffic delays "shall not constitute a significant environmental impact." These provisions went into effect July 1, 2020.

While Guideline 15064.3 governs a lead agency's assessment of traffic impacts under CEQA, it does not preclude a discussion of Level of Service (LOS) for informational purposes or other traffic analysis based on general plan or zoning standards, or on other agency policies. Therefore, while this Draft IS/MND does not include an analysis of LOS, Appendix J does provide this analysis for information purposes only. Pursuant to CEQA Guideline 15064.3, the Town can use this analysis to evaluate traffic impacts in support of General Plan consistency, apart from CEQA.

Street Network

Several key transportation facilities in the Town provide access to the project site:

> **Shiloh Road** is designated as a Crosstown arterial street, currently providing two motor vehicle lanes (one per direction) and bicycle lanes in both directions, [132] with a posted speed limit of 40 mph. The General Plan identifies the segments near the project site for future

[132] Arterial streets are high-capacity urban roads that are considered part of the major roadway system.

expansion to five motor vehicle lanes (two per direction plus a center turn lane or median). Sidewalks are not yet provided on Shiloh Road.

Hembree Lane is also designated as a Crosstown arterial street and provides three lanes (one per direction plus a center left-turn lane at intersections) on most segments to the north of the project site, as designated by the General Plan. Near the project site, four lanes are provided near the intersection with Shiloh Road (two northbound lanes and two southbound lanes). Sidewalks are provided on the east side of Hembree Lane. The intersection of Hembree Lane and Shiloh Road is currently a 3-way T-intersection; provision of a fourth leg is anticipated to occur if the property on the south side of Shiloh Road were to be developed.

Business Park Court is a local street that connects with Shiloh Road and provides access to the project site and adjacent commercial properties. Sidewalks are not provided on Business Park.

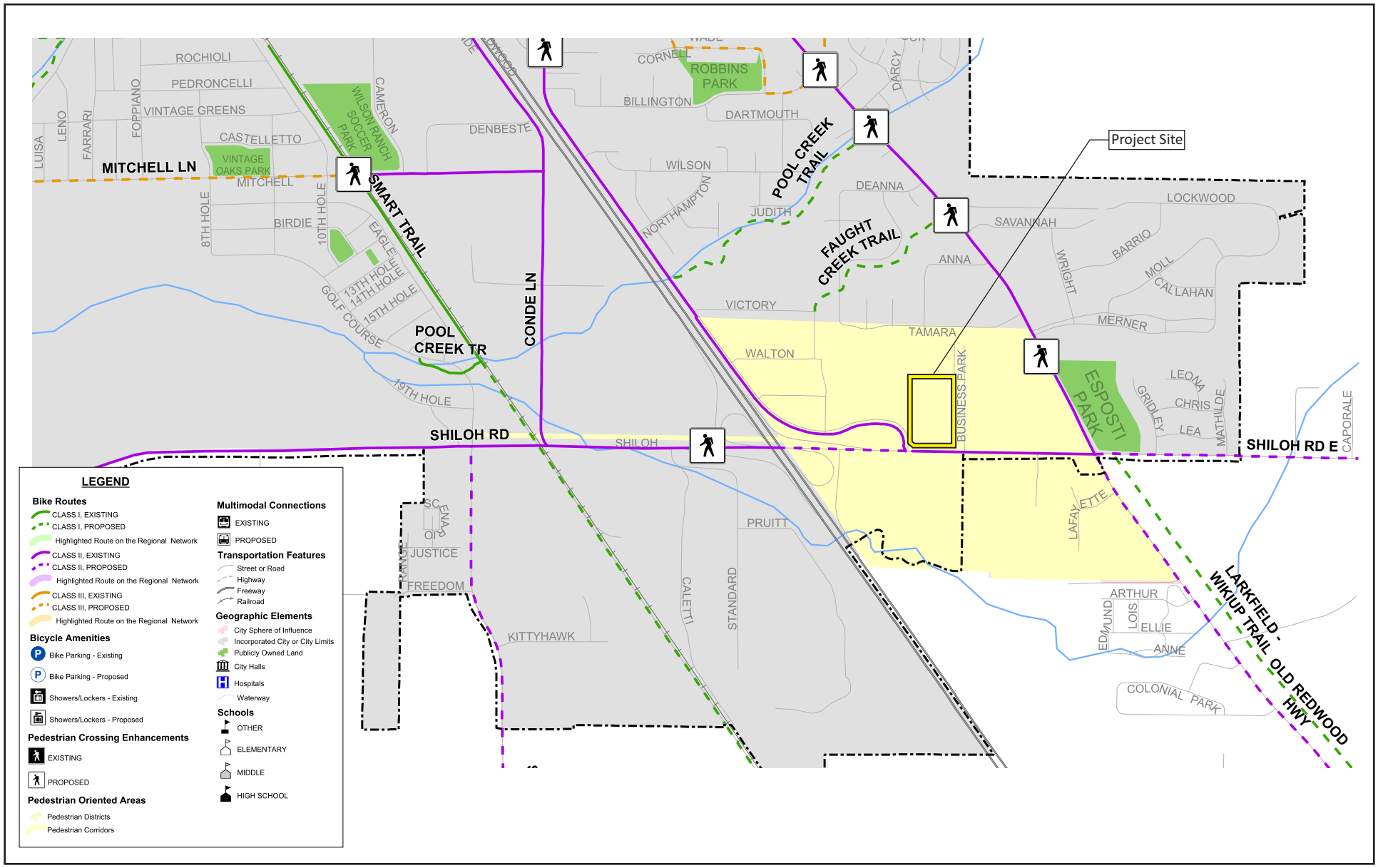
Old Redwood Highway is a Crosstown Connector,[133] running north–south approximately 1,400 feet (0.26 mile) east of the project site, providing direct access to neighborhoods east of the U.S. 101 freeway, and ultimately accessing downtown Windsor to the north. Bicycle lanes are generally provided in both directions, with a posted speed limit of 40 mph near Shiloh Road. There are no sidewalks on the segments of Old Redwood Highway nearest to Shiloh Road.

US-101 is the largest regional freeway in the area, providing north–south motor vehicle access throughout Sonoma County and to the adjacent counties of Marin (south) and Mendocino (north). US-101 provides two lanes per direction north of downtown Windsor, and three lanes per direction south of downtown Windsor (one of which is a High Occupancy Vehicle [HOV] lane). The posted speed limit is 65 mph, and access points in the Town are found at Old Redwood Highway in the north and Shiloh Road in the south.

As noted above:

- Bicycle lanes are provided on Shiloh Road, Hembree Lane, and Old Redwood Highway.
- Sidewalks are provided on the east side of Hembree Lane (See Exhibit 10).

[133] Connector Streets are local streets that provide convenient connections to local destinations, such as schools, parks, neighborhood centers, and retail services, as well as frequent connections to adjacent neighborhoods.



Source: Sonoma County Transportation Authority, December 4, 2014.

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Exhibit 10
Existing Bike Facilities

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Transit Service

Transit service is provided by Sonoma County Transit, which includes the following bus routes serving the project site:

- Route 66 Windsor Shuttle operates on a one-way loop connecting Windsor neighborhoods and downtown Windsor including the Windsor Depot. Near the project site, Route 66 arrives via eastbound Shiloh Road and serves a northbound bus stop on Hembree Lane, approximately 1,000 feet northwest of the project site.
- Route 60 Cloverdale Santa Rosa operates on Old Redwood Highway, with stops in both directions located approximately 1,500 feet (0.28 mile) from the project site. Route 60 provides intercity service that connects the Study Area with downtown Windsor, Healdsburg, and Cloverdale to the north, and downtown Santa Rosa to the south. In downtown Santa Rosa (Third Street Transit Mall) transfers to other Sonoma County Transit Routes, local Santa Rosa CityBus services, and regional services, provided by Golden Gate Transit, can be made.
- SMART operates between Larkspur and the Sonoma County Airport station located on Airport Boulevard approximately 2 miles southwest of the project site. Future plans to extend SMART service north to Cloverdale would include service in downtown Windsor at the Windsor Depot.

Study Intersections

1. Hembree Lane and Shiloh Road
2. Business Park Court and Shiloh Road
3. Old Redwood Highway and Shiloh Road
4. US-101 Northbound Off-ramp and Shiloh Road
5. US-101 Southbound Off-ramp and Shiloh Road

Regional Regulations

Plan Bay Area 2050

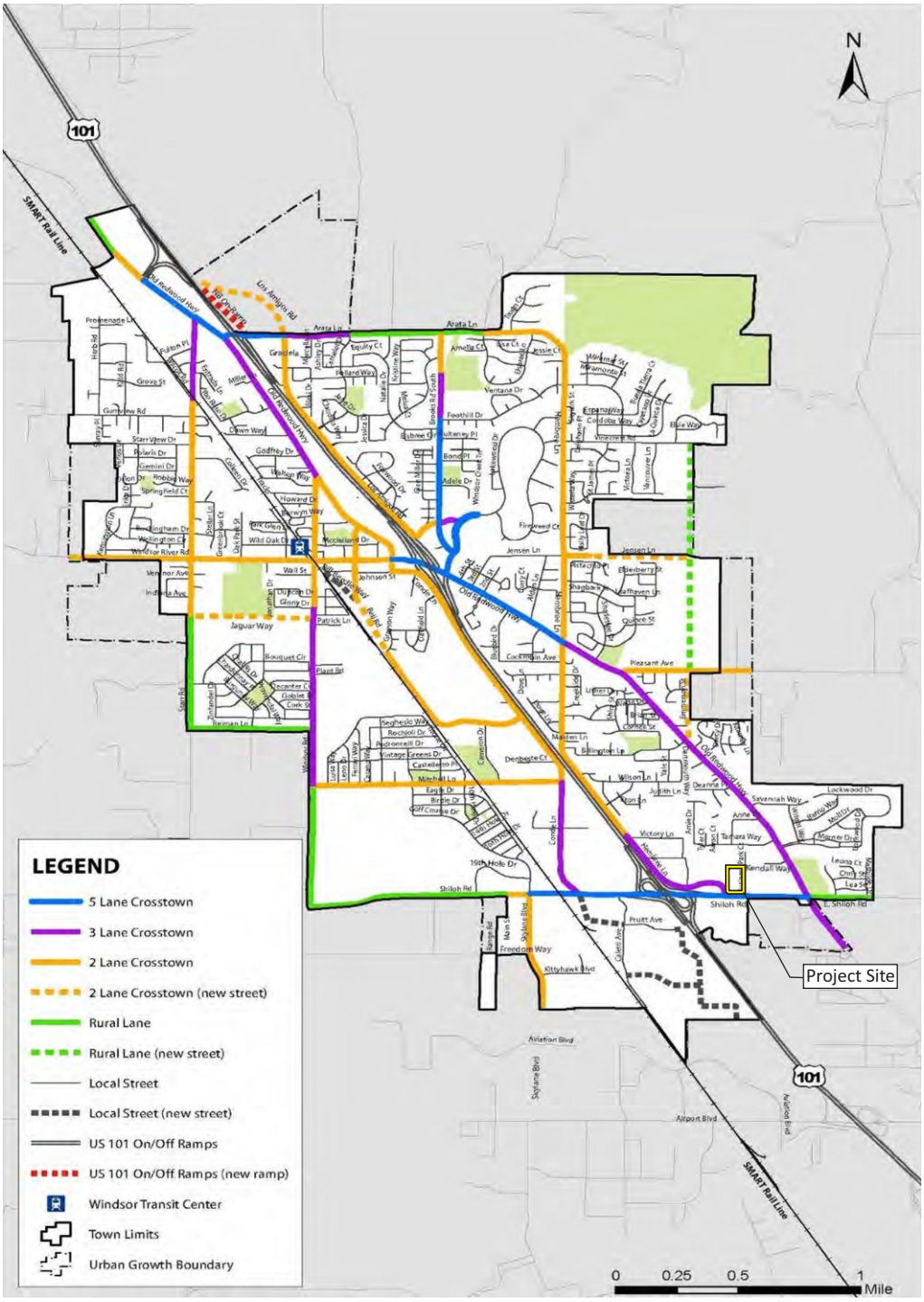
Plan Bay Area 2050 is the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) that describes the long-range plan for transportation improvements within the nine county Bay Area region that includes Windsor and Sonoma County.

Local Regulations

Town of Windsor General Plan

The Circulation Element of the General Plan contains a range of policies and implementation programs designed to maintain or improve transportation circulation within the Town. Exhibit 11 shows the planned street network as identified in the Circulation Element.

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Source: Windsor 2040 Circulation System. Shiloh Crossing Project Traffic Impact Study, June 2022.

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Exhibit 11
Planned Street Network

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Policy M-5.1 **Transit Oriented Development.** The Town shall encourage higher density mixed land uses within walking distances of existing and future transit stops.

Policy M-5.3 **Safe Routes to Transit.** The Town shall continue to implement a safe routes program that prioritizes pedestrian and bicycle access to transit stops and stations.

Policy M-2.10 **Bicycle and Pedestrian Connectivity.** The Town shall ensure that commercial and residential development, including affordable housing projects, provides convenient and direct connections to the nearest existing bikeways, pedestrian ways, and public transit facilities.

Would the project:

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than significant impact. This section assesses whether the proposed project is consistent with applicable regional and local transportation programs, plans, ordinances, and policies that were summarized in the Regulatory Framework, above. The proposed project would not conflict with the Town's adopted General Plan Transportation and Mobility Element or Bicycle and Pedestrian Master Plan.

Transit Facilities

As described above, Route 60 Cloverdale Santa Rosa operates on Old Redwood Highway, with stops in both directions located approximately 1,500 feet (0.28 mile) from the project site. Route 66 Windsor Shuttle arrives via eastbound Shiloh Road and serves a northbound bus stop on Hembree Lane, approximately 1,000 feet northwest of the project site. Therefore, the proposed project would result in a higher density mixed land use within walking distance of a transit site and would comply with General Plan Policy M-5.1.

Bicycle Facilities

Shiloh Road, Hembree Lane, and Redwood Highway currently provide bicycle lanes. The proposed project would leave existing bicycle lanes intact. The proposed project would provide 68 bicycle parking spaces, including 40 long-term bicycle parking spaces in a bike room within the North Building and 28 short-term bicycle parking spaces in outdoor bicycle racks that would be dispersed between both buildings. Therefore, the proposed project would support General Plan Policy M-2.10.

Pedestrian Facilities

Sidewalks are not currently provided on Shiloh Road or Business Park Court. The proposed project would provide a sidewalk on the north side of Shiloh Road between Hembree Lane and Business Park Court that would connect with an existing sidewalk on Hembree Lane. The proposed project would also provide sidewalks on both sides of Business Park Court. The proposed pedestrian facilities would improve pedestrian connectivity in the area and are not expected to result in increased hazards. Direct pedestrian and bicycle access to the site would be provided via both Shiloh

Road and Business Park Court (Exhibit 7). Therefore, the proposed project would comply with General Plan Policy M-2.10.

For the reasons listed above, the proposed project is not anticipated to conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Similarly, the proposed project would not conflict with any adopted transit plan or relevant ordinances and policies addressing circulation. This impact is less than significant.

b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Less than significant impact. VMT for the proposed project was evaluated according to guidance provided in the Technical Advisory on Evaluating Transportation Impacts in CEQA published by the Governor's Office of Planning and Research (OPR) in December 2018.[134] This publication identifies several criteria that may be used by jurisdictions to identify certain types of projects that are unlikely to have a significant VMT impact and can be "screened" from further analysis. The Technical Advisory specifies that 100 percent affordable housing projects are one such type of project, as are local serving retail projects. The Technical Advisory indicates that less than 50,000 square feet of retail space is typically considered local serving.

The proposed project is presumed to have a less than significant impact on VMT because:

- 100 percent of the residential units would be affordable housing, and the proposed provision of automobile parking does not exceed the minimum requirements for residential development in Windsor; and
- The retail portion of the development would provide 8,000 square feet of local serving retail space that is unlikely to result in a net increase in total VMT as determined by the OPR.

Therefore, impacts would be less than significant.

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

Less than significant impact with mitigation incorporated.

Collisions

The TIS analyzed reported collision data for the 5-year period from January 1, 2015, to December 31, 2019, was reviewed for key intersections near the project site. The rate of collisions was lower than the Statewide average at most intersections near the project site, except for the intersection of the US-101 northbound off-ramp with Shiloh Road which has a collision rate just above the State average (attributable mostly to collisions that were limited to property damage). There were no reported

[134] Governor's Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. Website: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed June 14, 2022. December.

collisions involving pedestrians at any of the five intersections and just one collision involving bicyclists. Based on this review of collision data, no significant safety issues are identified in the TIS.

Site Access Constraints

The proposed project would provide a sidewalk on the north side of Shiloh Road between Hembree Lane and Business Park Court that would connect with an existing sidewalk on Hembree Lane. The proposed project would also provide sidewalks on both sides of Business Park Court along the project frontage. The proposed pedestrian facilities would improve pedestrian connectivity in the area and are not expected to result in increased hazards. Direct pedestrian and bicycle access to the site would be provided via both Shiloh Road and Business Park Court.

Direct motor vehicle access to the project site would be provided via Business Park Court, which would be improved with curbs and widened to accommodate on-street parking in addition to the provision of sidewalks described above. The proposed project would provide an eastbound left-turn pocket from Shiloh Road to Business Park Court to enhance access and reduce potential hazards associated with left-turn movements. Since the proposed project would not have direct driveway across Shiloh Road, there are no safety concerns due to driveway sight distance.

Other future developments along Shiloh Road, such as the proposed Clearwater project, could create safety concerns for left-turn movements from Business Park Court to eastbound Shiloh Road. When future development along Shiloh Road triggers these safety concerns, left-turn movements from Business Park Court to eastbound Shiloh Road would be prohibited, and a westbound left-turn/U-turn lane is provided on Shiloh Road approaching the intersection with Hembree Lane. Provision of the left-turn/U-turn lane would allow vehicles exiting Business Court a right-turn (but desiring to travel east) to make a U-turn to travel east on Shiloh Road. However, the proposed project would not create a safety concern on its own and, therefore, these roadway updates would not be required as part of the proposed project.

The proposed project originally included the conversion of the existing westbound right lane on Shiloh Road (approaching the intersection with Hembree Lane) from a shared through/right-turn lane to a right-turn only lane, while the existing westbound through bicycle lane would remain to the right of the proposed right-turn only lane. However, this proposed configuration would increase the risk of potential conflicts between right-turning motorists and bicyclists continuing straight through the intersection. In addition, the proposed configuration conflicts with Manual on Uniform Control Traffic Control Devises (MUTCD) guidance which states that "[a] through bicycle lane shall not be positioned to the right of a right-turn only lane."[135] This proposed design created a potential hazard configuration. Where motorists must make a right-turn across an adjacent bicycle lane: the California Vehicle Code Section 21717 requires motorists to merge into the bicycle lane prior to making the right-turn. Motorists making a right-turn from an adjacent through lane thus typically merge into the bicycle lane approximately 50 to 200 feet before the intersection. This requirement is not applicable where a right-turn only lane is provided to the right of the bicycle lane.

[135] United States Department of Transportation (USDOT) Federal Highway Administration (FHWA). 2003. Manual on Uniform Traffic Control Devices (MUTCD) Chapter 9C. Markings. Website: https://mutcd.fhwa.dot.gov/htm/2003/part9/part9c.htm. Accessed June 17, 2022.

It was recommended that the project applicant revise the proposed westbound lane configuration on Shiloh Road approaching the intersection with Hembree Lane to ensure that provisions for right-turns by motor vehicles across the adjacent bicycle lane are consistent with applicable street design guidelines (including MUTCD and National Association of City Transportation Officials [NACTO] guidelines) and California vehicle code requirements.

As illustrated in Exhibit 7, the proposed project was revised to maintain the current westbound lane configuration approaching Hembree Lane, with a shared through/right-turn lane to the left of the bicycle lane. With this configuration, right-turning motorists would merge into the bicycle lane within 50 to 200 feet of the intersection, consistent with California Vehicle Code requirements. Therefore, impacts would be less than significant.

d) Result in inadequate emergency access?

Less than significant impact. Emergency vehicles would have direct access to the project site from Shiloh Road, Business Park Court, and Hembree Lane, including access from Hembree Lane via an EVA easement shown on the site plans. Fire truck movements would be adequately accommodated as shown on the Fire Truck Turning Exhibits provided in Appendix A of the TIS. The proposed project is not anticipated to result in adequate emergency access. Therefore, this impact is less than significant, and no mitigation is required.

Mitigation Measures

None**.**

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

Environmental Evaluation

Setting

Water Facilities

Pursuant to Government Code Section 65589.7, water and sewer service providers must establish specific procedures to grant priority water and sewer service to developments with units affordable to lower-income households. The Town is incorporating this regulation into local policy with its Housing Element Update, which is currently underway.

The Town's water supply comes surface water, groundwater, and recycled water. The primary source is surface water (Russian River), a majority of which is obtained from the Russian River Well Field. The Town also purchases surface water directly from the Sonoma County Water Agency (Sonoma

Water), which is then delivered via the Santa Rosa Aqueduct. The Town owns five groundwater wells, four of which are inactive. The one active well is used for the irrigation of Esposti Park.[136]

Maximum water allocations for each of the Sonoma Water primary water contractors are set forth within the 2006 Restructured Agreement for Water Supply (Restructured Agreement). Under this agreement, the average annual water allocation for the Town via the Russian River Well Field (direct diversion) is 4,725 acre-feet per year (AFY), in addition to the Town's average annual allocation of 900 AFY through transmission system deliveries via the Santa Rosa Aqueduct. Together, these two allocations provide the Town with 5,625 AFY under average annual conditions and 8.7 million gallons per day (mgd) under maximum flow conditions under the Restructured Agreement.[137]

Table 19 below compares water supply and demand for normal, dry, and multiple dry years through the year 2040.

The Windsor Water District provides water and wastewater reclamation services and operates functionally as a department of the Town. The Windsor Public Works Department, Water Division is responsible for the daily operation of the Town's water system, which includes pumping and treatment of more than 1.3 billion gallons of water annually. Windsor has more than 140 miles of distribution mains and more than 5 million gallons of water storage.[138]

There is an existing 12-inch water line along Shiloh Road that would connect to the project site via a proposed 8-inch water line. A 12-inch water line would be constructed along Business Park Court and would also connect to the project site via an 8-inch water line.

Table 19: Multiple-Dry Year Supply and Demand Comparison (AFY)

		2025	2030	2035	2040
First Year	Supply totals	6,087	6,427	6,427	6,427
	Demand totals	4,611	4,615	4,700	4,809
	Difference	1,467	1,812	1,727	1,618
Second Year	Supply totals	6,012	6,027	6,027	6,027
	Demand totals	4,858	4,912	5,009	5,131
	Difference	**1,154**	**1,115**	**1,018**	**896**
Third Year	Supply totals	6,012	6,027	6,027	6,027
	Demand totals	4,858	4,912	5,009	5,131
	Difference	**1,154**	**1,115**	**1,018**	**896**
Source: 2015 Urban Water Management Plan (UWMP) Table. ES-9, Town of Windsor					

[136] Town of Windsor. 2016. Final 2015 Urban Water Management Plan for the Town of Windsor Water District. Website: https://www.townofwindsor.com/DocumentCenter/View/21109/UWMP-Final-2015?bidId=. Accessed May 7, 2022.
[137] Town of Windsor. 2016. Final 2015 Urban Water Management Plan for the Town of Windsor Water District. Website: https://www.townofwindsor.com/DocumentCenter/View/21109/UWMP-Final-2015?bidId=. Accessed May 7, 2022.
[138] Town of Windsor. Overview the Water Division. Website: https://www.townofwindsor.com/225/Water. Accessed May 7, 2022.

Wastewater Facilities

The Windsor Public Works Department, Water Reclamation Division, is responsible for the treatment, storage, and disposal of the Town's wastewater. The Town's wastewater treatment plant (WWTP) provides tertiary treatment and ultraviolet light disinfection and has an average daily dry weather flow capacity of 2.25 mgd. The permitted discharge capacity of the WWTP is 1.9 mgd average daily dry weather flow, per RWQCB Order No. R1-2011-0006.[139] The current average dry weather flow is approximately 1.4 mgd. Wastewater in Windsor is delivered to the WWTP by a collection system that includes approximately 92 miles of public branch and trunk sewers, 1,728 manholes, 679 cleanouts, and approximately 7,600 private service laterals.[140]

There is an existing 12-inch sanitary sewer line along Hembree Lane and Shiloh Road and an 8-inch sanitary sewer line along Business Park Court. This would connect to the 8-inch sewer line at the southeast corner of the project site.

Stormwater

The Town does not operate a separate drainage system that treats stormwater. Instead, runoff from impervious surfaces is channeled directly into local waterways.[141] There are existing stormwater lines along Shiloh Road, Hembree Lane, and along the west side of the project site. The proposed project would feature a 9,821-square-foot rain garden at the northern end of the project site that would provide sufficient capacity to capture stormwaters and meter them into local waterways.

Electricity, Natural Gas, and Telecommunications Facilities

PG&E would provide electricity and gas to the project site.[142] There is an existing gas line and electric line along Business Park Court that would connect to the project site.

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than significant impact.

Water

As described above, there is an existing 12-inch water line along Shiloh Road that would connect to the project site via a proposed 8-inch water line. A 12-inch water line would be constructed along Business Park Court and would also connect to the project site via an 8-inch water line.

[139] North Coast a Regional Water Quality Control Board (North Coast RWQCB). 2011. Order No. R1-2011-0006. Website: https://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2011/110201_11_0006_Windsor_NPDES.pdf. Accessed May 7, 2022.

[140] West Yost Associates. 2015. Town of Windsor 2015 Sewer System Management Plan Update. Website: https://www.townofwindsor.com/DocumentCenter/View/2210/Windsor-SSMP-February-2015?bidId=. Accessed May 7, 2022.

[141] Town of Windsor. 2018. Town of Windsor 2040 General Plan. Website: https://www.townofwindsor.com/DocumentCenter/View/21498/Final-Town-of-Windsor-2040-General-Plan_2018-06-04. Accessed July 7, 2022.

[142] Pacific Gas and Electric Company (PG&E). Website: https://www.pge.com/en_US/about-pge/about-pge.page Accessed July 7, 2022.

Furthermore, as described in Impact 2.18(b), the Town's existing water supply would be sufficient to serve the proposed project. As such, no additional water supply infrastructure would need to be constructed as a result from the proposed project. Therefore, impacts would be less than significant.

Wastewater

There is an existing 12-inch sanitary sewer line along Hembree Lane and Shiloh Road and an 8-inch sanitary sewer line along Business Park Court. This would connect to the 8-inch sewer line at the southeast corner of the project site.

Furthermore, as described in Impact 2.18(c), the Town's existing wastewater treatment facility capacity would be sufficient to serve the proposed project. As such, no additional wastewater infrastructure would need to be constructed as a result from the proposed project. Impacts would be less than significant.

Stormwater Drainage

As described above, the proposed project would feature a 9,821-square-foot rain garden at the northern end of the project site, that would provide sufficient capacity to capture stormwaters and meter them into local waterways to ensure no net increase in off-site flow. The proposed storm drain system is in conformance with the Sonoma Water's Flood Control Design Criteria. According to the Initial Hydrology and Hydraulics Study, the underground storm drain system can convey the 100-year storm below ground, and an overflow route is available for runoff exceeding the 100-year storm. Any storm below a 100-year storm would be captured by one of the three proposed detention systems and metered to flows mimicking pre-existing site conditions. As such, there would be adequate storm drainage facilities to serve the proposed project. Impacts would be less than significant.

Electricity, Natural Gas, and Telecommunications Facilities

PG&E would provide electricity and gas to the project site.[143] There is an existing gas line and electric line along Business Park Court that would connect to the project site. As such, there is adequate electricity and natural gas infrastructure to serve the proposed project. Furthermore, per Section 16-2-100 and Section 16-8-810(g) of the Municipal Code, the proposed project would be required to underground existing overhead powerlines along the project frontage that are 21,000 volts or less. The proposed project would be required to underground these lines with site improvements, as a condition of approval. Impacts would be less than significant.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than significant impact. As described in Section 2.14 Population and Housing, it can be assumed that the proposed project would increase the population by approximately 515 persons. Based on the 2015 UWMP for the Windsor Water District water use rate of 143 gallons per capita per day (gpcd), the proposed project is estimated to use 73,645 per day, or approximately 96.8 million gallons per year (or 356.79 AFY).[144] The Town is anticipated to have access to at 6,087 AFY of water under average annual conditions. Based on the 2015 UWMP and as shown in Table 19, there

[143] Pacific Gas and Electric Company (PG&E). Website: https://www.pge.com/en_US/about-pge/about-pge.page. Accessed July 8, 2022.
[144] 515 persons *143gpcd =73,645 gallons per day

are sufficient water supplies to serve the Town in during normal, dry, and multiple dry years through the year 2040. The UWMP includes consideration of General Plan buildout, which includes population growth associated with the proposed project, as described in Section 2.14, Population and Housing. Therefore, the Town would have adequate water supplies to accommodate the proposed project without the need for new or expanded entitlements. Impacts would be less than significant.

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

Less than significant. As described in Section 2.14 Population and Housing, it can be assumed that the proposed project would increase the population by approximately 515 persons. Based on the 2015 UWMP for the Windsor Water District water use rate of 143 gpcd, the proposed project is estimated to use 73,645 gpd, or approximately 26.9 million gallons per year. The current average daily dry weather flow treated at the WWTP is 1.4 mgd, while the permitted capacity is 1.9 mgd, leaving excess capacity of 0.5 mgd. If the proposed project were to produce wastewater equivalent to the potable water daily demand, the proposed project would comprise approximately 15 percent of the available average dry weather capacity. Therefore, impacts would be less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than significant. Sonoma County Resource Recovery (SCRR) provides solid waste, recyclable, and organic material collection services to the Town. Solid waste and organic materials from the Town are taken to the Healdsburg Transfer Station located at 166 Alexander Valley Road, Healdsburg, California. The Healdsburg Transfer Station is a 7.8-acre facility that has a permitted capacity of 720 tons per day.[145] The Town has a waste delivery agreement that requires SCRR to direct inorganic non-recyclable trash to the Central Disposal Site in Petaluma, California. The Central Disposal Site has a permitted capacity of 2,500 tons per day.[146] However, the landfill receives 1,250 tons per day, which is 50 percent of its daily capacity. As of 2012, the current remaining capacity of the Central Landfill is 9,076,760 cubic yards. The proposed project would generate a demand for solid waste collection services. However, as explained above, the proposed project would be served by a waste disposal facility with adequate remaining capacity to accommodate the additional solid waste. Impacts would be less than significant.

e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

No impact. Solid waste disposal would follow the requirements of the franchised waste hauler, which must adhere to federal, State, and local statutes and regulations related to the collection of solid waste. The proposed project would comply with all State and local waste diversion

[145] California Department of Resources Recycling and Recovery (CalRecycle). 2011. Solid Waste Facility Permit–Healdsburg Transfer Station. Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/913?siteID=3654. Accessed May 7, 2022.

[146] California Department of Resources Recycling and Recovery (CalRecycle). 2012. Solid Waste Facility Permit – Central Disposal Site. Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/5962?siteID=3621. Accessed May 7, 2022.

requirements including Zoning Ordinance Section 27.20.080 regarding Solid Waste and Recyclable Materials Storage and the California Solid Waste Reuse and Recycling Access Act (Public Resources Code [PRC] §§ 42900—42911). Because solid waste disposal would be compliance with federal, State, and local statutes and regulations, no impact would occur.

Mitigation Measures

None.

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

Environmental Evaluation

Setting

CAL FIRE prepares maps of Very High Fire Hazard Severity Zones (VHFHSZ) that are used to develop recommendations planning. CAL FIRE categorizes parcels into VHFHSZ and Non-VHFHSZ zones. According to the VHFHSZ in Local Responsibility Area (LRA) map for Sonoma County, the project site is not located in a state responsibility area or land classified as a VHFHSZ. However, the Shiloh Ranch Regional Park, located 1 mile to the east of the project site, is a State Responsibility Area (SRA) and is classified as a moderate fire hazard zone.[147,148]

Would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. The project site is located in evacuation zone WI-D. In the event of an evacuation, residents of the project site could travel either east or west on Shiloh Road outside the Town. If they travel east on Shiloh Road, they could also exit the Town by going south on Old

[147] California Department of Forestry and Fire Protection (CAL FIRE). 2008. Sonoma County VHFHSZ in LRA Map. Website: https://osfm.fire.ca.gov/media/6820/fhszl_map49.pdf. Accessed March 16, 2022.
[148] California Department of Forestry and Fire Protection (CAL FIRE). 2008. Very High Fire Hazard Severity Zones in LRA, Sonoma County. Website: https://osfm.fire.ca.gov/media/6822/fhszs_map49.pdf. Accessed March 17, 2022.

Redwood Highway. If they travel west on Shiloh Road, they could exit the Town by traveling either north or south on US-101.[149] The proposed project would not modify any existing roadways in a way that would impede emergency access or evacuation. In addition, all project site access driveways would range from 20 to 27 feet in width and would be adequate for EVA use. Lastly, as described above, FCS sent a letter to SOCO Fire on May 16, 2022. On June 14, 2022, FCS received a response stating that SOCO Fire does not foresee any impacts on its ability to provide fire protection services as a result of the proposed project. Therefore, impacts would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less than significant impact. CAL FIRE designates the project site as a "Non-Very High Fire Hazard Safety Zone." The project is in an urbanized area and is surrounded by urban development and infrastructure. These land use types typically are not associated with wildland fires and usually preclude the possibility of exposure to such threats. However, recent wildfire events in Sonoma County have demonstrated that even urban areas are vulnerable to wildfires, particularly those close to undeveloped areas. The project site and surrounding area is flat, meaning slope would not exacerbate wildfire risks at the project site. In addition, the proposed project would comply with the California Fire Code and 2019 CBC to reduce potential impacts regarding wildfire. As such, impacts would be less than significant.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No impact. The project does not propose the installation of infrastructure for the purposes of combating wildfires (e.g., roads, fuel breaks, water tanks, etc.) and does not require the installation or maintenance of power lines or other utilities that would exacerbate fire risk. Furthermore, per Section 16-2-100 and Section 16-8-810(g) of the Municipal Code, the proposed project would be required to underground existing overhead powerlines along the project frontage that are 21,000 volts or less. The proposed project would be required to underground these lines with site improvements, as a condition of approval. No impacts would occur.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less than significant impact. The site is relatively flat with no hillsides or slopes nearby, meaning it is not at risk of landslides. The proposed project would install a stormwater detention basin and rain garden at the north end of the project site that would provide sufficient capacity to capture stormwaters and meter them into local waterways to ensure no net increase in off-site flow. The rain garden would consist of a stormwater biofiltration basin where stormwater would be treated using BMPs. The existing 36-inch storm drain and detention pond on-site would be removed to increase developable area on-site. The remaining portion of the existing 36-inch storm drain would connect

[149] Town of Windsor. May 2021. Windsor Evacuation Zone WI-D Possible Evacuation Routes.

to one of the two proposed storm drain systems. This would reduce susceptibility to downstream flooding, landslides, slope instability or drainage changes. Impacts would be less than significant.

Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
2.20 Mandatory Findings of Significance				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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)?	☐	☒	☐	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Environmental Evaluation

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

Less than significant impact with mitigation incorporated. A significant impact may occur if a project would have an identified potentially significant impact for any of the above issues. Based on the discussion provided in Section 2.4, Biological Resources, the proposed project's impacts related to both special-status species and wetland habitat would be less than significant with mitigation incorporated. Because of the potential for special-status wildlife species to occur on the project site, MM BIO-1a and BIO-1bwould be implemented. Implementation of MM BIO-1a and MM BIO-1b would reduce impacts to special-status species.

With mitigation, the proposed project would not eliminate a plant or animal community, nor would it substantially reduce the number or restrict the age range of a rare or endangered plant or animal. Therefore, potential impacts to biological resources would be less than significant with mitigation incorporated.

Based on the discussion provided in Section 2.5, Cultural Resources, the proposed project would not cause a substantial adverse change in the significance of a historical resource. However, there is a low potential that ground-disturbing activities associated with project construction could result in the discovery of and/or damage to previously undiscovered archaeological resources, human remains, or TCRs. MM CUL-1 specifies the procedure to follow if cultural resources are discovered and MM CUL-2 specifies the procedures to follow in the event human remains are uncovered. Implementation of MM CUL-1 and MM CUL-2, along with compliance with required guidelines and statutes, would ensure that potential impacts to cultural and tribal cultural resources are reduced to a less than significant level.

Based on the discussion provided above, with implementation of the mitigation measures, the proposed project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, impacts would be less than significant with incorporation of MM BIO-1a, MM BIO-1b MM CUL-1, and MM CUL-2.

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. A significant impact may occur if a project, in conjunction with other related projects in the area of the project site, would result in impacts that are less than significant when viewed separately, but would be significant when viewed together. The analysis presented in this Draft IS/MND included a review of proposed project's potential impacts related to air quality, biological resources, cultural resources, noise, and transportation, among other environmental issue areas. As presented throughout this Draft IS/MND, the proposed project's cumulative impacts would be either less than significant or there would be no impacts.

Based on the discussion provided in Section 2.3, Air Quality, the proposed project could have a significant impact related to compliance with the BAAQMD 2017 Clean Air Plan, fugitive dust during construction, a cumulatively considerable net increase of a criteria pollutant, and exposure of sensitive receptors to substantial pollutant concentrations. However, incorporation of MM AIR-1 and AIR-2 would reduce the proposed project's impacts to less than significant.

Based on the discussion provided in Section 2.7, Geology and Soils, the proposed project could have a significant impact resulting from unstable soils after rain events. The proposed project could also have a significant impact on paleontological resources. However, incorporation of MM GEO-1 and MM GEO-2 would reduce the proposed project's impacts to less than significant.

Based on the discussion provided in Section 2.9, Hazards and Hazardous Materials, the proposed project could release hazardous materials into the environment. However, incorporation of MM

HAZ-1,MM HAZ-2, MM HAZ-3, and MM HAZ-4 would reduce the proposed project's impacts to less than significant.

Based on the discussion provided in Section 2.11, Land Use and Planning, the proposed project could have a significant impact related to noise land use compatibility. However, implementation of MM LU-1 would reduce the proposed project's impacts to less than significant.

Based on the discussion provided in Section 2.13, Noise, the proposed project could generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. However, incorporation of MM NOI-1 would reduce the proposed project's impacts to less than significant.

Implementation of MM AIR-1, MM AIR-2, MM BIO-1a, MM BIO-1b, MM CUL-1, MM CUL-2, MM GEO-1, MM GEO-2 MM HAZ-1, MM HAZ-2, MM HAZ-3, MM HAZ-4 MM LU-1, and MM NOI-1 would reduce the proposed project's impacts to less than significant. No additional mitigation measures would be required to reduce cumulative impacts. Therefore, with implementation of the specified mitigation measures, the proposed project would cause less than significant cumulative impacts.

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

Less than significant impact with mitigation incorporated. Based on the discussion provided in the Project Description and the responses to Sections 2.1 through 2.19 of this Draft IS/MND, the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly, because the proposed project's potential impacts would be mitigated to a less than significant level. Therefore, with implementation of MM AIR-1, MM AIR-2, MM BIO-1a, MM HAZ-1b, MM CUL-1, MM CUL-2, MM GEO-1, MM GEO-2, MM HAZ-1, MM HAZ-2, MM HAZ-3, MM HAZ-4, MM LU-1, and MM NOI-1 the proposed project would not result in substantial adverse effects on human beings. Impacts would be less than significant with mitigation incorporated.

Mitigation Measures

Implementation of MM AIR-1, MM AIR-2, MM BIO-1a, MM BIO-1b, MM CUL-1, MM CUL-2, MM GEO-1, MM GEO-2, MM HAZ-1, MM HAZ-2, MM HAZ-3, MM HAZ-4, MM LU-1, and MM NOI-1.

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