3.12 Transportation

This Section evaluates potential impacts related to transportation resulting from construction and operation of the Project against significance thresholds derived from applicable local, state, or federal policies, or from Appendix G of the CEQA Guidelines.

3.12.1 Study Area

For the purpose of this Section, the Study Area includes the Project Site and the area which encompasses Humboldt County, consistent with the Regional Travel Demand Model.

3.12.2 Setting

Roadways

The Samoa Peninsula has limited vehicular access. New Navy Base Road is the primary route that links development along the peninsula. Immediately north of the Town of Samoa, New Navy Base Road intersects with SR 255 and splits, resulting in one route southeast over the Samoa Bridge to Eureka and US 101, and one route north through the remainder of the Samoa Peninsula where it connects to US 101 in Arcata. These are the only two routes available for employees, visitors, and freight traffic to access the Project Site. Immediate access to the Project Site is provided by Vance Avenue, which runs parallel to a portion of New Navy Base Road. Vance Avenue is connected to New Navy Base Road primarily by Bay Street and LP Drive (or Samoa Pulp Lane).

New Navy Base Road and Vance Avenue fall under the jurisdiction of the County of Humboldt which has identified New Navy Base Road as a Regionally Significant Street and Roadway (arterial) as part of the Regional Transportation Plan (HCAOG 2017). SR 255 falls under the jurisdiction of California Department of Transportation (Caltrans). Most of these roads are two-way roads with one travel lane in each direction. The exception is a 0.4-mile section with two travel lanes in the northbound direction along New Navy Base Road adjacent to LP Drive. At LP Drive, southbound New Navy Base Road has a left turn lane and a receiving/acceleration lane for vehicles turning left from LP Drive. Figure 3.12-1 presents a map of the area roadways.

Pedestrian and Bicycle Facilities

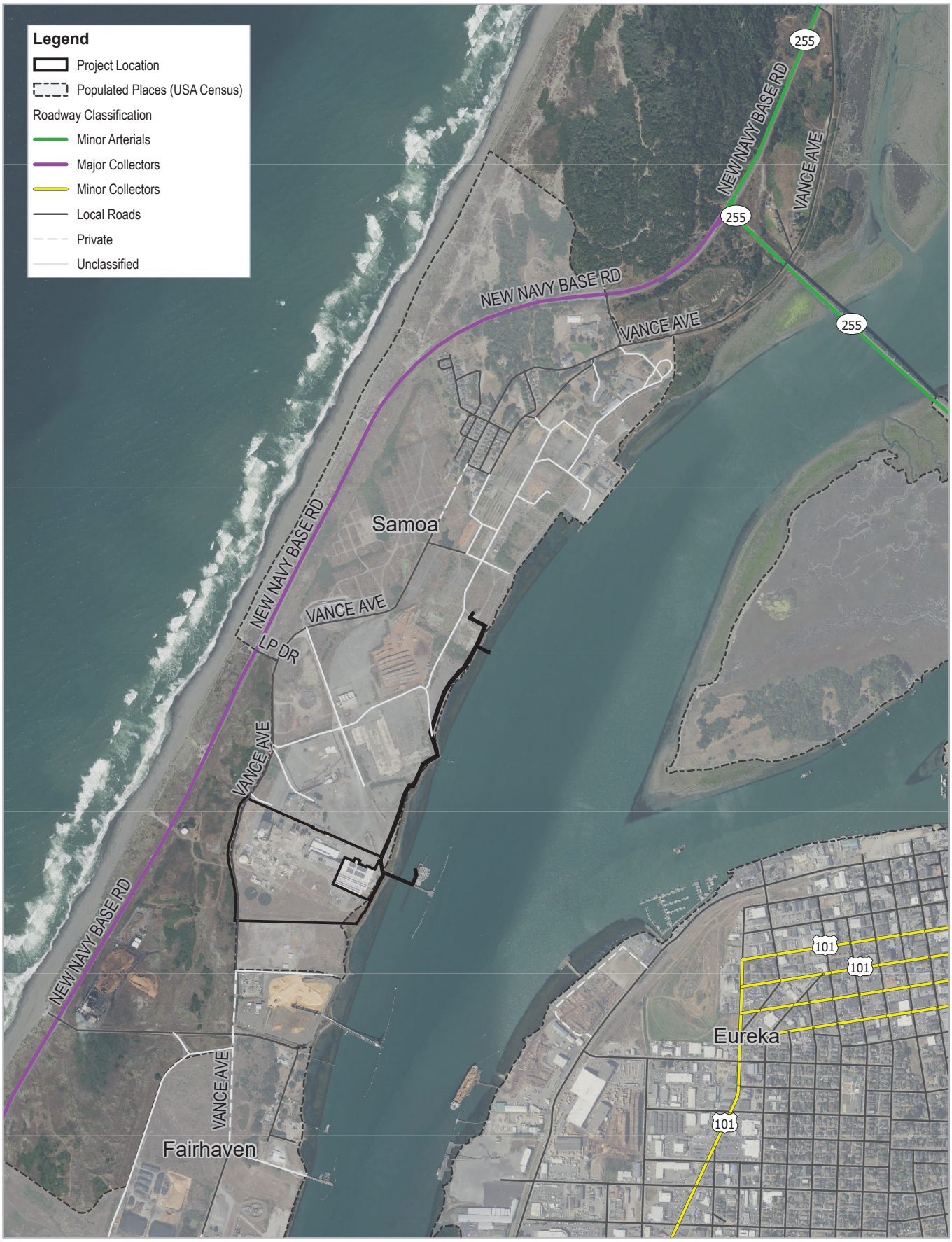
As specified in the Humboldt County Regional Transportation Plan (RTP), all streets, roadways, and highways in Humboldt County are open to bicycle use (HCAOG 2017). The RTP and the Humboldt County Regional Bikeway Plan (HCAOG 2018) contain various bikeway classifications, including Caltrans' definitions for Class I, II, and III bikeways, as defined below.

Class I Bike Path: A separated, surfaced right-of-way designated exclusively for non-motorized use (can be solely for bicyclists, or can be shared with pedestrians and/or equestrians). The minimum width for a two-way path is 8 feet (2.4 meters), with a preferred width of 10 feet. The minimum width for a one-way path is 5 feet (1.5 meter).

Class II Bike Lane: Within the roadway, a lane for preferential bicycle use, at least 4 feet wide or 5 feet when next to a gutter or parking. Established by a white stripe (on roadway) and Bike Lane signs. Adjacent vehicle parking and motorist crossflow is allowed. On a two-way road, a bike lane is required on both sides.

Class III Bike Route: A roadway that does not have a Class I or II bikeway, where bicyclists share a travel lane with motorists. Sometimes created to connect other bikeways. Can be established by a Bike Route sign, but not required.

Unclassified bikeway: Streets, roadways, and highways without features to qualify as Class I, II, or III.



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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
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Nordic Aquafarms California, LLC
Samoa Peninsula Sustainable Aquaculture Development Project
Samoa, Humboldt County, California

Area Roadways

Project No. **11205607**
Revision No. **-**
Date **Aug 2021**

FIGURE 3.12-1

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Print date: 02 Aug 2021 - 10:02

Data source: APE, July 2, 2021; USDA, NAIP Imagery, 2018;. Created by: jclark2

The Humboldt County Regional Bicycle Plan identifies New Navy Base Road adjacent to the Project Site as a proposed future Class I bike path, which is defined as a separated, surfaced right-of-way designated exclusively for non-motorized use (can be solely for bicyclists, or can be shared with pedestrians and/or equestrians). The minimum width for each direction is 8 feet (2.4 meters), with a 5 foot (1.5 meter) minimum width for a bi-directional path. The proposed Class I bike path would continue north along SR 255 to the City of Arcata (HCAOG 2018). Roadways in the Project Area do not currently include sidewalks, so pedestrians are limited to the roadway shoulder or in the road right-of-way.

Public Transit

There is currently one fixed-route public transit route in the Samoa Peninsula. The Samoa Transit System, operated by the Humboldt Transit Authority, provides bus service between the Phyllis Rex Apartment Complex and 3rd Street/H Street in Eureka, with a stop at Vance Avenue and Rideout Street in Samoa. This service began in January 2021, with hourly departures during weekdays from 7:05 a.m. to 6:35 p.m., and limited service on the weekends. Humboldt Transit Authority plans to extend this route down Vance Avenue to LP Drive with the completion of the proposed housing development. The planned route will be south along Vance Avenue, then loop back via LP Drive.

Dial-A-Ride (DAR) services are also available in the Project Site through the Humboldt Transit Authority. Paratransit is a form of transportation service that is more flexible and personalized than fixed route or commuter transit service. Paratransit is tailored to the needs of disabled and elderly individuals. Paratransit services include DAR, Dial-A-Lift (DAL) and non-emergency medical transportation services (HCAOG 2017).

DAR and DAL are discount transportation services available to seniors and/or the disabled with a doctor's verification of disability. These services are also available to individuals over the age of 72, regardless of their medical condition. A reservation must be made to utilize either DAR or DAL.

Airports

Humboldt County includes nine public airports, the nearest to the Project Site is Samoa Field Airport, which is owned and managed by the City of Eureka. Samoa Field Airport is not included in the County's Airport Land Use Compatibility Plan (ALUCP); therefore, Samoa Field Airport does not include any Land Use Compatibility Zones. However, it is located within Airport Protected Airspace (CC 333/FAR 77), specifically within the conical sphere. The Project Site has also been identified within Review Area 2 of the 2021 ALUCP, which represents the area in which airspace protection and overflight notification policies are applicable. The 2021 ALUCP was adopted April 13, 2021.

3.12.3 Regulatory Framework

Federal

There are no federal transportation plans, policies or regulations pertaining to the Project. The transportation facilities associated with the Project are under State or County Jurisdiction.

State

Caltrans

Transportation analysis in California is guided by policies and standards set at the state level by Caltrans for highway facilities under state jurisdiction, as well as by local jurisdictions. Any work or traffic control within the state right-of-way requires an encroachment permit issued by Caltrans. In addition, work that requires movement of oversized or excessive load vehicles on highway facilities requires a transportation permit by Caltrans.

The Transportation Impact Study Guide (TISG) was prepared to provide guidance to Caltrans Districts, lead agencies, tribal governments, developers, and consultants regarding Caltrans review of a land use project or plan's transportation analysis using a vehicle miles traveled (VMT) metric. This guidance is not binding on public agencies, and is intended to be a reference and informational document. The TISG replaces the *Guide for the Preparation of*

Traffic Impact Studies (Caltrans 2002) and is for use with local land use projects, not for transportation projects on the State Highway System (Caltrans 2020).

Senate Bill 743: Vehicle Miles Traveled

SB 743 created a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative method for evaluating transportation impacts, which was done in early 2016. OPR required that VMT become the primary metric or measure of effectiveness (MOE) for determining the significance of transportation impacts across California (Section 15064.3(a)). A project's effect on automobile delay no longer constitutes a significant impact under CEQA. "Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact" (15064.3). The updated CEQA Guidelines lists the criteria for analyzing transportation impacts for proposed land use projects in Section 15064.3, subsection b, as follows:

> *"(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact."*
>
> *"(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements…"*

Effective July 1, 2020, all lead agencies must analyze a project's transportation impacts using VMT (Caltrans 2019). OPR also published the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory, OPR 2018) which contains guidance on methodology and recommendations for establishing screening criteria and thresholds for VMT evaluation. Humboldt County has not yet adopted VMT thresholds against which the Project would be compared. However, in the absence of an applicable local threshold, OPR recommends an extremely conservative threshold of 15% below Baseline VMT per employee for employment-based projects. Caltrans has also published a *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (TISG, Caltrans 2020) that provides guidance regarding Caltrans review of a land use project's transportation analysis using VMT. This guidance is not binding on public agencies, but it is consistent with the guidance from OPR. See Impact TR-b, below for a more detailed description of the VMT analysis performed for this document.

Regional

Variety in Rural Options of Mobility (VROOM) Regional Transportation Plan (RTP)

The Humboldt County Association of Governments (HCAOG) is the regional transportation planning agency for Humboldt County which is responsible for updating, preparing, and adopting a regional transportation plan for its area of jurisdiction. The RTP policies serve to guide the development of the regional transportation system over the next 20 years. The RTP identifies New Navy Base Road and SR 255 as Regionally Significant Roadways, which are principal arterial highways or fixed guideway transit facilities that offer a significant alternative to regional highway travel. The following Policies identified in the RTP Complete Streets Chapter apply for the transportation aspects of the Project:

Policy CS-2 *HCAOG recognizes the planned Humboldt Bay Trail as a regional priority multi-use trail, and supports multi-jurisdictional, public, and private efforts to develop it. (Also supports objectives: Efficient & Viable Transportation System, Economic Vitality)*

Policy PT-5 *HCAOG supports designs and projects to enhance pedestrian access to bus stops and bicycle facilities at bus stops. (Also supports objectives: Safety, Economic Vitality)*

Policy C-4 *HCAOG will support and plan transportation and projects that provide safe and convenient travel modes for people who cannot or choose not to drive.*

Humboldt Regional Bicycle Plan

The 2018 Regional Bicycle Plan is a 20-year planning document that is updated every five years. The primary goal stated in the plan is to create the safest conditions for bicyclists by providing bikeways and improving roadways to eliminate barriers to bicycle travel (HCAOG 2018). Projects identified as priorities in the current Regional Bicycle Plan are anticipated to implemented within a five-year period. Planned facilities in the Project vicinity include a proposed Class I Bike Path (Humboldt Bay Trail – West Bay) along Vance Avenue.

Humboldt County Regional Trails Master Plan

The 2010 Regional Trails Master Plan is a 20-year planning document that guides development of a regionwide active transportation system of on-street and off-street trails, bikeways, and walkways. The primary goal stated in the plan is to promote the development of a regional active transportation system within and between communities (HCAOG 2010). Prioritized projects include natural surface/multipurpose trials, equestrian trails, as well as paved trails such as Class I Bike Paths and Class II Bike Lanes, which may overlap with Projects identified in the Regional Bicycle Plan.

Humboldt County Regional Pedestrian Plan

The 2008 Regional Pedestrian Plan is a 20-year planning document that guides future development and pedestrian infrastructure within the County. The primary goal stated in the plan is to make walking an integral transportation mode in the County (HCAOG 2008). The Pedestrian Plan will assist HCAOG and its member agencies to plan, design, and acquire funding for the construction of pedestrian improvements and pedestrian programs in Humboldt County. There are no planned pedestrian improvements within the Project vicinity identified in this plan.

Local

Humboldt County General Plan – Circulation Element

The following transportation-related policies contained in the 2017 Humboldt County General Plan are used to inform the analysis in this section. The policies described below are non-binding, because the 2017 General Plan does not apply within the Coastal Zone. See the Humboldt Bay Area Plan for related policies which apply within the Coastal Zone.

C-P1 (d). Circulation System

Planning retail, service, and industrial facilities, community centers, major recreational facilities, employment centers, and other intensive land uses that consider the location of collectors or arterial roads consistent with the Land Use Element.

C-P5. Level of Service Criteria

The County shall strive to maintain Level of Service C operation on all roadway segments and intersections, except for US 101, where Level of Service D shall be acceptable. Level of Service improvements for automobiles should not adversely affect Level of Service and/or Quality of Service for other modes of transportation, if possible.

C-P9. Circulation Planning for Bicycles, Pedestrians and Transit

Circulation planning and project review shall include an assessment for bicycle, pedestrian, and public transit access.

C-P11. Transportation Demand Management Programs.

Require residential subdivisions and multifamily development that would result in fifteen or more dwelling units, and non-residential development that would employ greater than ten persons, and that require a discretionary permit, to comply with County transportation demand management programs.

C-P17. Highway Improvements

Encourage state and federal highway improvements that promote safety and connectivity for all users, especially for communities with highway arterials.

C-P35. Protection of Designated Pedestrian and Bicycle Routes.

New development along and adjacent to planned and designated pedestrian and bicycle routes shall consider and incorporate those routes.

C-P36. Bicycle Facilities

Encourage the planned placement of secure and/or weather-protected bicycle storage facilities at public buildings and bus stops, where appropriate. Incentivize placement of bicycle parking and storage at businesses, new or modified bus stops and multi-family housing.

C-P42. Public Infrastructure Supporting Private Investment

Support investments in public infrastructure that increase readiness and facilitate private initiatives and investment into port enterprises such as marine-dependent industrial use, boat building and repair facilities, fleet service facilities, tourism, recreation, and fish processing facilities.

Humboldt Bay Area Plan (Local Coastal Program)

The following transportation-related policies contained in the 2014 Humboldt Bay Area Plan (HBAP) are used to inform the analysis in this section. The Project is considered to be located in a rural development area. The Project site does not currently contain any public coastal access (i.e., beach, boat ramp, dock for public use). The following policies in the 2014 Humboldt Bay Area Plan are applicable to the transportation-related aspects of the Project.

Section 3.50 of the HBAP: Access

30211. Development shall not interfere with the public's right of access to the sea where acquired through use, or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

30212. Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

3.12.4 Evaluation Criteria and Thresholds of Significance

Evaluation Criteria	Significance Thresholds	Sources
Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Conflict with Humboldt Bay Area Plan, Regional Bicycle Plan, Regional Trails Master Plan, Regional Pedestrian Plan, or Regional Transportation Plan	CEQA Guidelines Appendix G, Checklist Item XVII (a)
Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	15% below Baseline VMT per Employee for Humboldt County	CEQA Guidelines Appendix G, Checklist Item XVII (b) OPR Technical Advisory
Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Non-conformance with defined safety regulations or roadway design standards, or otherwise create unsafe conditions	CEQA Guidelines Appendix G, Checklist Item XVII (c)
Would the Project result in inadequate emergency access?	Increases in traffic, road closures, or insufficient emergency access during construction or inadequate design features to accommodate emergency vehicle access and circulation during operation. Greater than zero incidences of delayed emergency access	CEQA Guidelines Appendix G, Checklist Item XVII (d)

3.12.5 Methodology

The impact analysis below evaluates the potential for the Project to conflict with the County's adopted plans and policies related to circulation, including the General Plan, Regional Transportation Plan, and Regional Bicycle Plan. The analysis also evaluates the potential for the Project to have short-term or long-term impacts on roadways, emergency access, or on the safety or performance of vehicular traffic, bicyclists, pedestrians, or public transit. The technical methodology and assumptions utilized in the analysis are described within each section.

3.12.6 Impacts and Mitigation Measures

Impact TR-a: **Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? (Less than Significant)**

Terrestrial Development

CEQA Guidelines Section 15064.3(b)(3), Qualitative Analysis, states that for many projects, a qualitative analysis of construction traffic may be appropriate. Construction traffic would be limited to ingress/egress of heavy equipment, material delivery and related support vehicles. A traffic control plan will not be necessary during the construction phase of the Project, because no traffic lanes on local roads will be blocked or modified during construction. The Project will prepare a Construction and Operations Transportation Plan to assist in facilitating safety measures related to transportation and logistics on- and off-site. Further, the required Construction and Operations Transportation Plan shall implement measures to reduce congestion related to construction related vehicle trips including, but not limited

to, off-hauling and materials delivery to not occur concurrently with peak travel periods; thereby, not contributing to congestion at peak travel periods. This impact is considered less than significant.

The Project would not involve any modification to existing roads in the vicinity of the proposed facility. The Project site does not currently contain any public coastal access (e.g., beach, boat ramp) and adequate access exists nearby (e.g., Samoa Beach). Because no streets or coastal access would be modified, there is no conflict with the Humboldt Bay Area Plan or Regional Transportation Plan, Humboldt County Code or policy. The public access protection policies of the Coastal Act and the HBAP require in part that maximum public access be provided consistent with public safety needs and the need to protect natural resource areas from overuse; that development not interfere with the public's right of access; and that the public access policies of the Coastal Act shall be implemented in a manner that takes into account the capacity of the site and the fragility of natural resources in the area. The Project site contains no public access, and vehicles coming to and from the site will not impact fragility of natural areas as they would operate along the existing roadways not planned for expansion/alteration into natural areas. The Project site is located directly east of New Navy Base Road at the intersection of New Navy Base Road and LP Drive across from an informal access point to Samoa Beach known as Milwaukee Beach Access Point. Roadside parking in this area provides little buffer between industrial trucks and recreational visitors who utilize these non-designated parking areas. In an effort to reduce overall traffic and unwarranted parking, two nearby projects have been approved by the County of Humboldt. The Humboldt County Department of Public Works implemented Ordinance 2659 (Humboldt County Code Section 431-79), which prohibits parking on the west side of New Navy Base Road between designated hours in an effort to discourage off road vehicle use of adjacent vegetated dunes. Additionally, as a required condition of approval to the Samoa Town Master Plan Project (County CDP Case No. PLN-2020-16401), required improvements will be executed to dedicate Milwaukee Beach Access as a parking lot with 10 parking spaces, including one handicap accessible parking space. Cumulatively, these projects will enhance the overall public recreational access points adjacent from the Project Site.

The project will not conflict with the Coastal Act and HBAP policies related to circulation systems in relation to public access.

The only planned improvement from the Regional Bicycle Plan and Regional Trails Plan in the Project vicinity includes a proposed Class I Bike Path (Humboldt Bay Trail – West Bay) along Vance Avenue. The Project does not conflict with the Regional Bicycle Plan to extend the transit service down to LP Drive. The Project may result in an increase in transit demand and would support the extension of transit service down to LP Drive. The Project does not propose any modifications to Vance Avenue; therefore, would not conflict with the planned bikeway. The impact is considered less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Ocean Discharge

The Project will utilize the existing pipe located on the north side of the property for ocean discharge. No automobile traffic is associated with this, and it does not involve any modification to existing roads, vehicular access, transit, or multimodal access. No construction activity would take place related to this Project. The impact is considered to be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Humboldt Bay Water Intakes

The use of the RMT II Dock and the Red Tank Dock (water intake locations) will not affect the existing circulation system, as they do not generate traffic, and it does not involve any modification to existing roads or vehicular access. Construction traffic would be limited to ingress/egress of heavy equipment, material delivery and related support vehicles for approximately 3-4 months. Because the existing street network in the vicinity of the Project

accommodates truck traffic, and because no traffic lanes on local roads will be blocked or modified during construction, a traffic control plan will not be necessary during the construction phase of the intakes. Further, construction related vehicle trips such as off-hauling and materials delivery will not occur concurrently with peak travel periods, thereby reducing congestion at any given time. The impact is considered to be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Compensatory Off-Site Restoration

The removal of piles at the Kramer Dock in Fields Landing will be conducted from shore and/or barge via an excavator, and will require construction-related vehicles to access this off-site location temporarily. This construction traffic would be limited to ingress/egress of heavy equipment and related support vehicles for approximately 30 days. A traffic control plan will not be necessary because no traffic lanes on local roads will be blocked or modified during the construction activities. The staging area would be located south of South Bay Depot Road in upland areas only. The piles would be transported to and legally disposed of at a licensed landfill. Piles would be transported via logging trucks and routed via US 101. The coastal access and use of the existing marina adjacent to the location of the piles will remain accessible by vehicles and boating vessels as it currently does. Removal of Spartina will also include limited mobilization vehicles for transportation of equipment needed for removal. The impact is considered to be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Impact TR-b: Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? (Less than Significant)

CEQA Guidelines Section 15064.3, subdivision (b) establishes the criteria for analyzing transportation impacts. This Section determines that, for land use projects, “Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. […] A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.” Cal. Code Regs. tit. 14 § 15064.3.

Terrestrial Development

As of July 1, 2020, all lead agencies must analyze a project’s transportation impacts using VMT. This EIR evaluated screening criteria from OPR, and estimated Project VMT of the proposed project, as described below.

Screening Thresholds

The OPR Technical Advisory provides various screening criteria related to VMT that quickly identify when a project should be expected to cause a less than significant impact without conducting a detailed VMT study. According to the OPR Technical Advisory, projects that generate fewer than 110 trips per day can be assumed to cause a less than significant transportation impact (OPR 2018). The proposed Project would include 150 employees that are anticipated to generate more than 110 daily trips. The Project exceeds the 110 daily trip threshold; thus, this screening threshold is not applicable. Other screening criteria identified by OPR include map-based screening for residential and office projects, presumption of less than significant impact near transit, and presumption of less than significant for affordable housing. The map-based screening could potentially apply; however, the County does not have screening maps for VMT, therefore a detailed VMT study was conducted to determine if the Project would have an impact on VMT. The Project is also not near high-quality transit or near an existing major transit stop; therefore, these screening thresholds do not apply.

Assumptions used in VMT Analysis

OPR recommends basing VMT per employee calculations for office projects on vehicular commute trips. Although the proposed Project is not a traditional “office” project, this methodology is applicable, since Project VMT will be primarily generated by employee commutes (as opposed to commercial retail projects that would anticipate significant visitor or customer trips). Neither HCAOG nor Humboldt County have adopted agency-specific thresholds or guidance for VMT. However, the OPR Technical Advisory (OPR 2018) contains guidance on methodology and recommendations for establishing thresholds for VMT evaluation.

Absent local adopted or guiding thresholds, GHD has used a significance threshold requiring a reduction of 15% from regional baseline VMT per employee, consistent with the OPR Technical Advisory and CEQA guidelines for evaluating Project impacts of employment-based (office) projects. The Project-level VMT per employee estimates are reviewed against the regional baseline for impact determination.

Additionally, for the purposes of transportation impact analysis under CEQA, heavy truck traffic (including freight traffic) is not to be considered “vehicle miles traveled.” As described in the Technical Advisory (OPR 2018), vehicle miles traveled refers to the amount and distance of automobile travel attributable to a project. The term “automobile” means on-road passenger vehicles, specifically cars and light trucks, and therefore can be attributed to employees of the Project Site (OPR 2018).

Regional Travel Demand Model

The California Department of Transportation (Caltrans) maintains the Humboldt County Travel Demand Model (HCTDM). The HCTDM is a trip-based model that utilizes a traditional four-step travel demand modelling process. It is a standard modelling process that uses land use inputs to determine trip generations and attractions, trip distribution, mode choice, and trip assignment. The HCTDM has a base year of 2015 and encompasses the area of Humboldt County. The base year model was utilized for estimation of baseline VMT, as it is the latest available model and has been calibrated and validated against traffic count data. A model scenario with the project land use added was created to analyze project-level VMT.

The model boundary is limited by the County and does not account for the full length of trips with origins and destinations outside of the model boundary. OPR recommends estimating baseline and project-level VMT by estimating trip lengths outside of the model boundary to account for the full length of vehicular trips. However, the Project is not anticipated to have employees commute to or from outside of the County. According to 2018 US Census journey-to-work data for the census designated places (CDP’s) of Samoa and Fairhaven, where the Project is located, employees in these areas live within 25 miles, and this is within the Humboldt County boundary. Commute travel behavior is not substantially affected beyond the County boundary for this specific Project; therefore, measuring VMT utilizing the HCTDM is appropriate and reasonable.

Vehicle Occupancy

The VMT estimation is based on vehicle trips, and the model’s HBW vehicle trips can be estimated utilizing a vehicle occupancy factor applied to the person trips associated with the automobile mode. The number of employee vehicle trips associated with the Project will ultimately be utilized in the VMT calculation. Although an occupancy factor of 1.17 was provided in the model’s technical documentation (based on 2006-2008 American Community Survey data for Humboldt County) for home-based work (HBW) trips, more recent US Census data is the best available data and is more conservative. Table 3.12-1 presents the most current US Census data for vehicular occupancy for Humboldt County compared to the Samoa CDP, where the Project is located, and compared to other nearby places.

Table 3.12-1 Vehicle Occupancy and Population

US Census Place	Vehicle Occupancy
Humboldt County, CA	1.07
Samoa, CDP	1.11
Fairhaven, CDP	1.04
Eureka, CA	1.06
Arcata, CA	1.07

Source: Special Tabulation: Census Transportation Planning. From Table B207201 – Workers per car, truck, or van by Time leaving home; American Community Survey 2012-2016 Five-year estimates, US Census.

Comparing the US Census data shown in Table 3.12-1, the Samoa CDP vehicle occupancy is relatively higher than the County and other places shown. Taking the average vehicle occupancy between Samoa and Fairhaven results in an average vehicle occupancy of 1.075. This is comparable to the vehicle occupancy reported countywide and for the nearby Cities of Eureka and Arcata. Therefore, it is reasonable to utilize 1.07 persons per vehicle as a conservative estimate for HBW vehicle occupancy for the proposed Project's employment based VMT calculation.

Threshold of Significance – 15% Reduction from Baseline

OPR recommends utilizing vehicular commute trips to calculate VMT for office projects. The same method can be used for the Project because all vehicular trips are anticipated to be employee-based, rather than from customers or visitors. The OPR Technical Advisory (OPR 2018) also states that an office use that would result in a 15% or greater reduction in VMT on a per employee basis compared against the countywide average VMT per employee basis (baseline) can be assumed to cause a less than significant transportation impact. Similarly, work-based projects which achieve a VMT per employee of 15% or more below that of existing development can be considered to have less than significant impacts. OPR guidance states that a county is an appropriate geographical boundary for a baseline if that is the area within which workers of the project would be expected to live. Employees of the proposed project are expected to reside within the County of Humboldt, so countywide data was used to establish the baseline VMT per employee.

Baseline VMT per Employee

Baseline work VMT for the County was estimated based on home-based-work (HBW) vehicular trips (attractions only) for each traffic analysis zone (TAZ) in the HCTDM, and the distance those trips travel within the model network. HBW trips are trips within the model which start at the residence and end at the work location. Baseline VMT per employee uses the number of countywide employees, based on the model's land use inputs, which are employment-based for non-residential uses. The model outputs provide the number of HBW automobile trips in terms of person trips. The VMT estimation is based on vehicle trips, and the model's HBW vehicle trips can be estimated utilizing the vehicle occupancy factor, as previously described, applied to the person trips associated with the automobile mode. A vehicle occupancy factor of 1.07 was utilized to calculate the number of HBW vehicular trips for the employment based VMT calculation.

Project VMT Results & Impact Determination

Project-level VMT estimates were calculated based on running a model scenario with the project land uses added. This was performed by adding 150 employees in the "Manufacturing" land use to the TAZ where the Project is located (TAZ 307). This model land use category was chosen as the most appropriate for the project site as the only other potential categories available in the model were "Agriculture" or "Other." The project-level VMT was calculated using the same methodology as previously described to calculate the Baseline VMT. The Project-level VMT uses HBW trip attractions, adjusted for a vehicular occupancy factor of 1.07, and then multiplied by the trip distances for the Project TAZ only. Table 3.12-2 presents the VMT results from the HCTDM with countywide (baseline) data, the existing TAZ, and Project only results.

Table 3.12-2 HCTDM Results

Area	HBW Vehicle Trips	Employment	Work VMT	Average Trip Length (one-way)	Work VMT per Employee
Humboldt County	111,493	53,002	733,642.35	6.58	13.8
Existing Area (TAZ 307)	112.51	67	638.27	5.67	9.5
Project Only (model run)	**204.64**	**150**	**1,577.64**	**7.71**	**10.5**

The countywide average daily work VMT per employee is 13.8 based upon HCTDM and is used as a baseline for this analysis. Applying OPR's guidance, an employee-based project generating 15% or fewer below the baseline, or 11.7 VMT per employee per day or less, would reasonably have a less than significant VMT impact.

According to OPR guidance, new development in a low-VMT area that is of a similar nature to surrounding development in that area will likely result in a similar level of VMT. Given that the project is comparable to surrounding industrial land uses on the Samoa peninsula, and that TAZ 307 exhibits a VMT of 9.5 or 31% below the regional average, it is reasonable to conclude that the project would exhibit below-threshold VMT per employee and therefore have a less than significant VMT impact.

Based on the Project-level VMT results from the model run, the Project results in a VMT per employee of 10.5, which is lower than the threshold (approximately 24%). Both the screening number and the actual Project calculation estimate more than a 15% reduction in VMT per employee for the proposed Project; therefore, is the Project would have a less than significant impact.

Additionally, transportation best practices incorporated into the Project by the applicant will further reduce the calculated Project VMT. These measures are described in Section 2.2 of the Project Description and include encouragement of ridesharing and vanpooling, encouragement of on-site dining, working with the local transit authority to extend bus service to the site at LP Drive, and installing shower facilities and changing rooms to support employees that bike to work. The VMT analysis is conservative in the fact that reductions are not in place for these best practices, including the potential for mode shift to transit with future bus service to LP Drive. Therefore, the impact is less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Ocean Discharge

The Project will utilize the existing pipe located on the north side of the property for ocean discharge. No automobile traffic is associated with this, and it does not involve any modification to existing roads or vehicular access. OPR's Technical Advisory states that for the purposes of VMT, the vehicle type "automobile" refers to on-road passenger vehicles, specifically cars and light trucks (OPR 2018). Additionally, no construction activity would take place related to this Project. Per OPR guidance, this is presumed to be a less than significant impact.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Humboldt Bay Water Intakes

The use of the RMT II Dock and the Red Tank Dock (water intake locations) will not generate any commute or automobile traffic and will not have any effect on VMT. OPR's Technical Advisory states that for the purposes of VMT, the vehicle type "automobile" refers to on-road passenger vehicles, specifically cars and light trucks (OPR 2018). Therefore, construction traffic and heavy trucks are not considered in the analysis of VMT. Further, no roadway capacity projects are included in this Project. Per OPR guidance, this is presumed to be a less than significant impact.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Compensatory Off-Site Restoration

The removal of piles at Kramer Dock and Spartina removal involve temporary construction-related traffic including heavy vehicles. The off-site restoration will not generate any "operational" commute or automobile traffic associated with VMT. OPR's Technical Advisory states that for the purposes of VMT, the vehicle type "automobile" refers to on-road passenger vehicles, specifically cars and light trucks (OPR 2018). Therefore, construction traffic and heavy trucks are not considered in the analysis of VMT. Further, no roadway capacity projects are included in this Project. Per OPR guidance, this is presumed to be a less than significant impact.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Impact TR-c: Would the Project 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)

Terrestrial Development

The existing road network that provides access to the Project Site does not contain sharp curves or dangerous intersections, and the Project would not result in changes to these features. The Project would not alter or affect access to roadways or intersection configurations of the existing transportation infrastructure which currently serves over 200 daily truck trips. The area's flat topography and low vegetation do not limit visibility at intersections. There are existing turn lanes/merge lanes on New Navy Base Road at LP Drive to facilitate in the ingress and egress of truck traffic, including construction traffic.

Truck traffic, employee, and emergency response vehicles would be able to ingress and egress without creating a new hazard. It is not anticipated that the project would result in a significant impact due to the creation of a hazard or exacerbation of an existing hazard.

Daily roadway traffic counts including heavy vehicle volumes were collected in the vicinity of the Project site during three weekdays (August 3-5, 2021) on New Navy Base Road and on SR 255. Heavy vehicles are considered to be vehicles with three or more axels and buses. The existing average daily traffic (ADT), average heavy vehicles, and average heavy vehicle percentage (HV%) over the three days are presented in Table 3.12-3.

Table 3.12-3 Existing Traffic and Heavy Vehicles

ID	Roadway	Location	Existing ADT	Existing Average Heavy Vehicles	Existing Average HV%
1	New Navy Base Road	n/o Cookhouse Rd	4,785	258	5.4%
2	New Navy Base Road	n/o LP Drive	3,170	222	7.0%
3	SR 255	e/o New Navy Base Rd	8,360	195	2.3%
4	SR 255/New Navy Base Rd	n/o SR 255	6,497	150	2.3%

As shown in Table 3.12-3, New Navy Base Road currently has a relatively high amount of heavy vehicle/truck traffic compared to the segments of SR 255. Based on the VMT analysis previously described, the Project is anticipated to add 205 automobile trips daily and 16 trucks per day, based on correspondence with Nordic Aquafarms (project applicant) and the Project Description. The daily project vehicular trips and daily project truck trips are then added to the existing roadway volumes, and conservatively assume a 50/50 split for Project trips traveling on SR 255 either

north of the Samoa Bridge (towards Arcata) or east towards Eureka. Table 3.12-4 presents the Project-added daily trips, and the resulting Existing with Project ADT and HV%.

Table 3.12-4 Project and Existing with Project Traffic and Heavy Vehicles

ID	Roadway	Location	Project-Added Daily Trips	Project-Added Heavy Vehicles	Existing + Project ADT	Existing + Project Trucks	Existing + Project Truck %
1	New Navy Base Road	n/o Cookhouse Rd	205	16	5,006	274	5.5%
2	New Navy Base Road	n/o LP Drive	205	16	3,391	238	7.0%
3	SR 255	e/o New Navy Base Rd	144	8	8,471	203	2.4%
4	SR 255/New Navy Base Rd	n/o SR 255	43	8	6,557	158	2.4%

As shown in Table 3.12-3 and Table 3.12-4, the Project's anticipated truck volumes are not expected to have an effect on the average daily percentage of truck traffic that currently exists. With the Project in place, New Navy Base Road will remain at 7.0% heavy vehicle traffic daily north of LP Drive, closest to where the Project is located. The Project does not present a significant intensification of use beyond what the road network currently experiences and accommodates. Further, the Project is proposed in an existing industrial area, and Project access formerly served 500+ wood chip trucks per day. The Project traffic and anticipated truck traffic are consistent with and compatible with the existing surrounding uses. The estimated number of daily Project trucks (16) is not significant compared to the existing daily trucks travelling along New Navy Base Road (274).

Additionally, historical collision data over a five-year period from 2015-2019 was reviewed along New Navy Base Road in the Project Vicinity for any potential safety implications. The collision data was from the Transportation Injury Mapping System (TIMS), which provides access to the Statewide Integrated Traffic Records System (SWITRS). There were two minor-injury collisions reported along New Navy Base Road in the vicinity of LP Drive. None of the collisions involved trucks, pedestrians, or bicycles. Based on the roadway volumes and characteristics, two collisions over a five-year period does not present a significant concern related to safety.

Since the Project will not significantly change the current conditions, and the number of Project trucks is less than significant compared to current conditions that include over 200 daily truck trips on New Navy Base Road, the Project does not substantially increase hazards due to incompatible uses, nor does the Project contain geometric design features that would increase hazards. The Project is considered to have a less than significant impact.

The two land uses present in the area are primarily industrial and residential. The vicinity of the Project site is industrial, with residential uses in the town of Samoa to the north, and in Fairhaven, located to the south of the site. Potential increases in traffic related to the Project would not affect the residential areas as truck traffic would utilize New Navy Base Road and SR 255. Conversely, no Project element would result in increased residential traffic in the industrial areas. Turning movements from the Project potentially conflicting with turning traffic from the beach access is insignificant due to the fact that the southbound direction of New Navy Base Road dead-ends at the end of the Samoa peninsula. The impact would be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Ocean Discharge

The Project will utilize the existing pipe located on the north side of the property for ocean discharge. No automobile traffic is associated with this, and it does not involve any modification to existing roads or vehicular access. The impact is considered to be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Humboldt Bay Water Intakes

The use of the RMT II Dock and the Red Tank Dock will not affect or change the existing circulation system or geometric design thereof. They do not involve any modification to existing roads or vehicular access. Construction traffic would be limited to ingress/egress of heavy equipment, material delivery and related support vehicles. Because the existing street network in the vicinity of the Project accommodates truck traffic and because no traffic lanes on local roads will be blocked or modified during construction, a traffic control plan will not be necessary during the construction phase of the Project. The impact is considered to be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Compensatory Off-Site Restoration

The local and primary roadways that would provide access to the staging area include Depot Road, Fields Landing Drive, Orchard Avenue, and US 101. Piles would be transported via logging trucks and routed to/from US 101. Construction-related traffic along these roadways would be temporary and limited to ingress/egress of heavy equipment and related support vehicles. Construction or related traffic will not significantly impede existing traffic. There is an existing overhead structure (US 101 overpass) on Orchard Avenue which has a vertical clearance of 15 feet and 4 inches. Additionally, overpass vertical clearances within the area on US 101 are 15 feet and 1 inch, and 15 feet and 5 inches. The contractor associated with the construction vehicles would develop a plan to address any potential concerns with vertical clearances. The existing roadways and intersections can currently accommodate the expected construction-related vehicles; therefore, would not result in an increase in hazards due to a geometric design feature or incompatible use. Transport of equipment for Spartina removal will also be needed and will be limited. The impact is considered to be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Impact TR-d: Would the Project result in inadequate emergency access? (Less than Significant)

Terrestrial Development

The primary roadways that would provide access to the Project site include New Navy Base Road and SR 255. Vance Avenue could be an alternative route for emergency access. Construction-related traffic on the roads surrounding the Project will not substantially impede the existing traffic flows. Thus, emergency access via SR 255 and New Navy Base Road would not be restricted or changed. During Project operations, the emergency access routes would remain in their existing configuration. The daily employee and freight traffic associated with the Project would not limit access to emergency vehicles, because the road network currently accommodates the expected traffic. The Project design includes the construction of a 20-foot-wide emergency access road around Building 2 (southwest portion of the parcel), providing additional ingress/egress around the facility in the event of an emergency. Development plans would need to be checked and approved by the fire department to ensure adequate emergency access during construction and implementation. The impact would be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Ocean Discharge

The Project will utilize the existing pipe located on the north side of the property for ocean discharge. No automobile traffic is associated with this, and it does not involve any modification to existing roads or emergency access. No construction activity would take place related to the ocean discharge as it currently exists. The impact is considered to be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Humboldt Bay Water Intakes

The use of the RMT II Dock and the Red Tank Dock will not affect or change the existing emergency access, as they do not involve any modification to existing roads or vehicular access. The existing fire suppression water line will remain accessible for emergency access. Construction-related traffic on the roads surrounding the Project will not substantially impede the existing traffic flows. Thus, emergency access via SR 255 and New Navy Base Road would not be restricted or changed. During the operation of the Project, the emergency access routes would remain in their existing configuration. The daily employee and freight traffic associated with the Project would not limit access to emergency vehicles because the road network is designed to accommodate the expected traffic. The impact is considered to be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

Compensatory Off-Site Restoration

Piles would be transported via logging trucks and routed to/from US 101. Construction-related traffic along these roadways would be limited to ingress/egress of heavy equipment and related support vehicles. Construction or related traffic will not substantially impede existing traffic or emergency access along these roadways. Emergency access along Depot Road, Fields Landing Drive, or US 101 would not be restricted or changed. Construction equipment associated with Spartina removal will not interfere with emergency access. The impact is considered to be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

3.12.7 Cumulative Impacts

Impact TR-e: Would the Project contribute to a cumulatively significant impact to Transportation? (Less than Significant)

As indicated in Impact TR-a, no public streets or coastal accessways are proposed to be modified as part of the Project. Adequate public coastal access exists and will continue to exist nearby under cumulative conditions with future development within the Samoa peninsula. The Project does not conflict with the planned Class I bike path along Vance Avenue, or the potential to extend transit service down to LP Drive. Therefore, the Project does not conflict with the Humboldt Bay Area Plan, RTP, Regional Bicycle Plan, Regional Trails Master Plan, or Regional Pedestrian Plan. With future development within the Samoa peninsula, it is presumed to have no cumulative impact distinct from its project impact. Therefore, the impact is considered to be less than significant.

Public Resources Code (PRC) Section 21099 and California Code of Regulations (CCR) Section 15064.3(a), now establish that VMT is generally the most appropriate measure of transportation impacts. The evaluation of VMT impacts associated with the Project in Impact TR-b is inherently a cumulative impact analysis because it addresses project-generated VMT based on an efficiency threshold that is aligned with long-term goals and relevant plans. As

indicated in Impact TR-b, the Project's VMT analysis indicates a less than significant project impact. Because the Project falls below an efficiency-based threshold (VMT per employee), it is presumed to have no cumulative impact distinct from its project impact (OPR 2018). Therefore, the impact is considered to be less than significant.

As indicated in Impact TR-c, the Project will not increase hazards due to a geometric design feature or incompatible uses. The project construction would not contribute to a cumulative impact relative to increasing hazards or emergency access. Future development within the Samoa peninsula would increase traffic along New Navy Base Road. However, the cumulative traffic associated with this new development in conjunction with the Project is anticipated to be compatible with the design of the roadway, vehicle types using the roadway, and compatible with any intersection improvements related to adjacent development. Future development would need to undertake a similar analysis and review as part of their project applications as well. Vance Avenue is planned for widening including bicycle lanes and sidewalk within the Samoa town site (Samoa Town Master Plan Final Supplemental Master EIR, September 2019). The RTP (VROOM) also identifies improvements of Vance Avenue to Major Collector and National Highway System standards from Bay Street to South Spur off Vance Avenue (VROOM 2018). Under cumulative conditions with the anticipated development and roadway improvements, there are no geometric safety hazards anticipated as any improvements would be required to meet County design standards. The Project traffic and vehicle types are identical and compatible with the surrounding uses. The roadway geometry currently accommodates the Project's vehicle types, including automobiles and heavy vehicles/trucks. Therefore, the Project does not substantially increase hazards due to a geometric design feature and the Project's has compatible uses. Turning movements from the Project potentially conflicting with turning traffic from the beach access is insignificant due to the fact that the southbound direction of New Navy Base Road dead-ends at the end of the Samoa peninsula. Heavy vehicle percentage along the roadways in the Project vicinity are forecasted to have an insignificant change under cumulative conditions. The impact is less than significant.

As indicated in Impact TR-d, the Project will not result in inadequate emergency access, rather the Project will construct an emergency access road around the facility, increasing emergency access for fire trucks, ambulance, and other emergency response vehicles on site. It is presumed to have no cumulative impact distinct from its project impact. Future development within the peninsula may contribute more traffic to the main evacuation routes in the area (New Navy Base Road and SR 255) in the event evacuations are ordered in the vicinity of the Project. However, all future development within the Project will be required to comply with County requirements for emergency access. Therefore, future development within the Project area, in combination with cumulative development in the Project vicinity, is expected to maintain adequate emergency access and access to evacuation routes. This is considered to be a less than significant impact.

No automobile traffic is associated with the ocean discharge or water intakes. Emergency access would be maintained under cumulative conditions. Therefore, cumulative transportation impacts are less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than Significant.

3.12.8 References

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Special Tabulation: Census Transportation Planning. From Table B207201 – Workers per car, truck, or van by Time leaving home; American Community Survey 2012-2016 Five-year estimates, US Census.