February 2019 | EIR Addendum

ADDENDUM TO NORTHEAST QUADRANT SPECIFIC PLAN EIR

City of Dixon

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1. Introduction

This document is an Addendum to the previously certified Environmental Impact Report, State Clearinghouse No. 92113073, (EIR) for the Northeast Quadrant Specific Plan (NQSP) in the City of Dixon ("City"). The City does hereby prepare, declare, and publish the Addendum to an EIR for the following:

> The proposed project is comprised of three separate parcels, and would combine two of the parcels to create a single parcel for the development of a 502,000-square foot industrial warehouse distribution building. The third parcel would be used as the location for the relocation of the existing water retention pond. The existing storm water retention pond is approximately 6-acres in size and would increase to approximately 8-acres.

The City has reviewed the proposed project within the context of the approved NQSP and the NQSP EIR. On the basis of this Addendum, including Appendices A through E and the whole record, the City has determined that there is substantial evidence to support the determination that the proposed project does not substantially change the analysis contained in the NQSP EIR; there is no substantial new information regarding the proposed project or surrounding environment that was not previously analyzed in the NQSP EIR; therefore preparation of a subsequent EIR or negative declaration is precluded. . This addendum to the NQSP EIR has been prepared pursuant to Title 14, Sections 15162 and 15164 of the California Code of Regulations.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Dixon's Planning Division Office, 600 East A Street, Dixon, CA 95620, Monday through Friday, 9:00 am to 5:00 pm.

1. Introduction

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2. Environmental Setting

2.1 PROJECT LOCATION

The approximate 39.7-acre project site is within the City of Dixon in Solano County within the Northeast Quadrant Specific Plan area. The site is on the north east corner of Dorset Drive, approximately 300 feet of the Dorset Drive and North First Street (State Route-113) intersection and consists of three separate parcels:

- Parcel A, 25.7-acres, Assessor's Parcel Number (APN) 0111-190-010
- Parcel B, 5.8-acres, APN 0111-080-200
- Parcel C, 8.2-acres APN 0111-190-030

Figure 1, *Regional Location*, and Figure 2, *Local Vicinity*, illustrate the location of the project site in relation to its regional and local contexts. Figure 3, *Aerial Photograph*, provides an aerial view of the project site.

2.2 ENVIRONMENTAL SETTING

2.2.1 Existing Land Use

The project site is vacant, and Sites A and B, are zoned Service Commercial (CS), Professional and Administrative Office (PAO), Light Industrial (ML), and Planned Unit Development (PUD). Site C is zoned Highway Commercial (CH) and PUD on the western portion of the site, and ML-PUD on the eastern portion.

2.2.2 Surrounding Land Use

Sites A and B are bounded by vacant land to the north, east, and south, and a Walmart Supercenter to the west. Site C is bounded by vacant land to the north and east, a Walmart Supercenter to the south, and Auction Lane and Interstate 80 (I-80) to the west.

2. Environmental Setting

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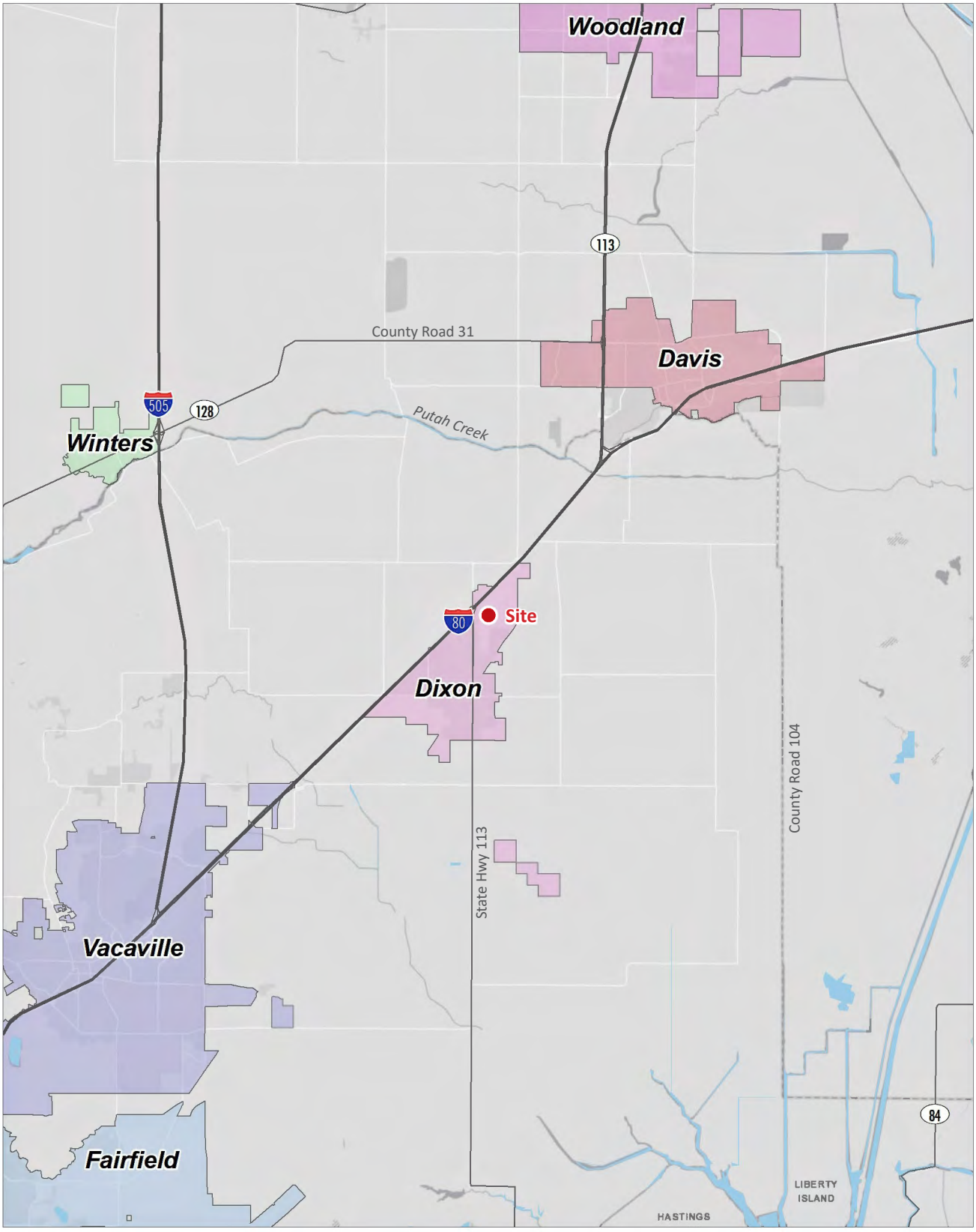

Source: ESRI, 2019

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Scale (Miles)

Figure 1
Regional Location

2. Environmental Setting

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Source: ESRI, 2019

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Scale (Feet)

Project Boundary

Figure 2
Local Vicinity

2. Environmental Setting

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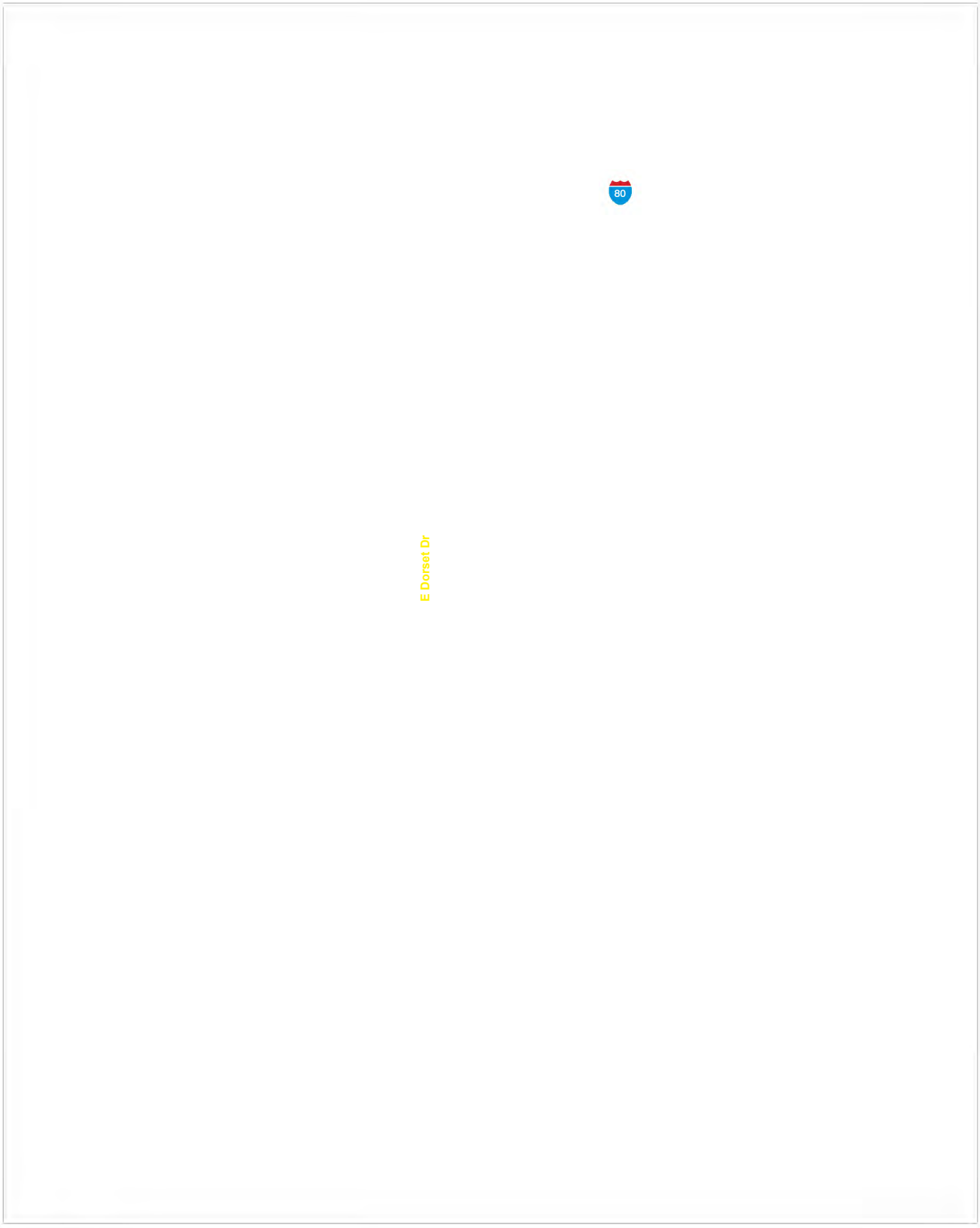

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Project Boundary

Figure 3
Aerial Photograph

2. Environmental Setting

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3. Project Description

3.1 PROJECT BACKGROUND

The EIR for the NQSP was certified on May 9, 1995. The EIR evaluated potential environmental impacts that would arise as a result of developing the Northeast Quadrant Specific Plan project that allowed for development of the area shown in Figure 4 to the density and intensity shown in Table 1.

Table 1 Northeast Quadrant Specific Plan Land Use and Zoning Designations

Land Use and Zoning	Acres	Floor Area Ratio	Thousand Square Feet
Highway Commercial (HC)	142.2	0.25	1,548.6
Community Commercial (CC)	51.9	0.25	565.2
Professional & administrative Office (O)	105.4	0.30	1,377.0
Light Industrial (ML)	214.4	0.25	2,334.8
Major Roads, Drainage Easements, and Open Space	129.1	n/a	-
Total Land Use	**643.0**		**5,825.6**

Since adoption of the NQSP, the City has approved development as shown in Table 2.

Table 2 Development in Northeast Quadrant Specific Plan

Land Use and Zoning	Approved Thousand Square Feet	Developed Thousand Square Feet	Remaining Thousand Square Feet
Highway Commercial (HC)	1,548.6	220.0	1,328.6
Community Commercial (CC)	565.2	4.4	560.8
Professional & administrative Office (O)	1,377.0		1,377.0
Light Industrial (ML)	2,334.8	62.3	2,272.5
Major Roads, Drainage Easements, and Open Space	-	-	-
Total Land Use	**5,825.6**		

In addition to the development shown in Table 2, East Dorset Drive was extended from Lincoln Highway (State Route 113) east to provide access to the Walmart. East Dorset Drive also provides access to the proposed project.

3.2 PROJECT DESCRIPTION

The proposed project would combine Parcels A and B to create a contiguous approximately 31.5-acre parcel for the development of a 502,000-square foot Type III-b tilt-up industrial warehouse distribution facility, approximately 50 feet tall to the parapet. Site C, approximately 8.2-acres in size, would include the water retention pond, relocated from Parcel A, and would increase the pond size from approximately 6-acres to 8-acres. The water retention pond would service storm water from the proposed development. Figure 4, *Conceptual Site Plan*, illustrates the proposed site plan for the proposed project.

The zoning designations of the proposed project would remain unchanged – Sites A and B, CS-PAO-ML-PUD, and Site C, CH-PUD on the western portion and ML-PUD on the eastern portion.

All water, sewer, and power utilities exist in East Dorset Drive. Storm drainage for the project site will be accommodated by the relocated and enlarged storm drainage basin on Parcel C.

3.3 SPECIFIC PLAN MITIGATION MEASURES

The EIR evaluated each of the environmental issue areas and included mitigation measures as appropriate. Except as noted in Table 3, all mitigation measures adopted with the EIR would be applied to the proposed project.

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
LU-1: Prime agricultural land will be converted to non-agricultural use, including 60 acres regulated by Williamson Act Agricultural Preserve.	None Feasible	SU	Same – Project site is located on agricultural land within the NQSP and therefore covered by the EIR statement of overriding considerations.
LU-2: The project will extend a sewer line with capacity to serve new development.	N/A	LS	Same – Sewer line was extended to serve commercial development and is available for the proposed project.
LU-3: The project may impair the agricultural productivity of prime agricultural land adjacent to the NQSP area.	LU-A: Ensure that all future development within the NQSP strictly enforce the landscape medians and agricultural buffer zones established by the specific plan.	LS	Same – Project will comply with NQSP, and includes landscape buffers. See Figure 4.
LU-4: The project will cause the displacement of existing residents.	N/A	LS	Less Impact – There are no homes within the project area.
LU-5: This project may conflict with adopted community plans or goals established by LAFCo.	LU-B: The project will require review and approval by the Solano County LAFCo before it can be annexed to the City of Dixon or developed. The City of Dixon will annex the entire frontage of County roads abutting developments within their jurisdiction. This will include: 1. Pedrick Road from I-80 South	LS	Less Impact – Project site is within city limits and does not require annexation. This mitigation measure is not applicable to the proposed project.

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	including the Vaughn Road intersection. 2. Vaughn Road from North First Street east including the Pedrick Road intersection.		
LU-6: The project conflicts with adopted community plans and goals established by the Williamson Act Agricultural Preserve	LU-C: The proposed NQSP shall be reviewed by the Dixon City Council and the Solano County Board of Supervisors and findings shall be made that the 60 acres of the project site currently under Williamson Act should be withdrawn from Agricultural Preserve.	LS	Less Impact – Project site is not under Williamson Act Contract. This mitigation measure is not applicable to the proposed project.
LU-7: Cumulative impact - Growth inducement.	None Feasible	SU	Same – Proposed project will result in growth consistent with the expectations of the NQSP.
G-1: Construction associated with project implementation may cause soil erosion, wind and water erosion, and siltation of local drainages.	G-A: An erosion control plan shall be prepared prior to construction. This plan shall include standards for permanent erosion control design, requirements for full establishment of vegetation, and emphasize drought-tolerant and climate-adapted vegetation. G-B: Disturbed areas of the project site that are not actively under construction during the winter rainy season shall not be left exposed for more than one month.	LS	Same – Proposed project will prepare an erosion control plan and implement applicable best management practices (BMPs) as required by state law and stipulated in these mitigation measures.
G-2: Damage to structures and infrastructure caused by soil prone to shrink/swell behavior.	G-C: Prior to development of any facility within the specific plan area, a detailed geotechnical investigation of on-site soils shall be conducted to identify the soils subject to shrink/swell behavior. G-D: Hazards associated with shrink/swell soils shall be avoided through proper construction methods which include site drainage, and responsive grading, excavation and foundation design. Potential adverse effects due to soils with high shrink /swell are avoidable if these soils are identified prior to the design and construction, and appropriate design and construction methods are applied.	LS	Same – Proposed project will conduct a geotechnical investigation prior to development. Appropriate design and construction methods will be applied to avoid shrink/swell soils, as necessary.
G-3: Ground-shaking and liquefaction could occur due to possible seismic event along active faults in the area.	G-E: All structures and new buildings constructed within the project area shall conform to the latest seismic structural standards of the Uniform Building Code (UBC) as a minimum standard.	LS	Same – Proposed project will comply with the latest standards of the California Building Code (which includes the UBC) and will prepare a geological investigative report. Public and private utility lines will include

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	G-F: Plans for individual buildings subject to public occupancy shall be accompanied by an investigative report prepared by a geologist specialized in engineering. This report shall identify underlying geology including depth of water table, depth to bedrock, and presence and characteristics of sand lenses. Necessary structural measures to adequately respond to the degree of probable risk attributable to these underlying formations shall be recommended. G-G: No public or private electrical, water, wastewater or gas lines shall be permitted to cross identified potential ground failure areas without sufficient precautionary emergency provisions for: rapid shut-off, minimum disruption of service, and any adverse impact on adjoining and surrounding uses in the event of seismic-induced ground failure.		precautionary emergency provisions.
G-4: The project will minimally contribute to cumulative soil erosion or the potential for exposing people to possible seismic event.	N/A	LS	Same – Proposed project will minimally contribute to cumulative soil erosion or the potential for exposing people to possible seismic event.
WQ-1: Change in land use from agriculture to urban uses will result in potential increases to the quantity of surface water runoff.	WQ-A: Prior to commencement of on-site grading, the project shall demonstrate, via a detailed hydraulic analysis of post development topographic and drainage conditions, that the final project design would not substantially cause flooding to adjacent or downstream parcels or conveyance facilities. The project proponent shall participate in city-wide drainage improvements in order to increase downstream flow capacities to accommodate this project. The project design shall consider and evaluate the feasibility of detaining all surface water drainage on-site. WQ-B: Final detention basin(s) design, conveyance facilities, and management of the proposed facilities on-site shall, as demonstrated by the hydraulic analysis of the project proponent and approved by the City of Dixon, adequately accommodate runoff from a	LS	Same – Proposed project will develop a detailed hydraulic analysis of post development topographic and drainage conditions. Any final detention basins of the proposed project will be designed to accommodate runoff from a 10-year and 100-year storm event.

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	10-year and 100-year storm event. Ultimate development of the entire site must be considered, although drainage infrastructure construction could be phased as needed.		
WQ-2: Change to the quality of runoff would result from the fundamental change in land uses from agriculture to urban uses.	WQ-C: Prior to commencement of on-site grading, the project sponsor shall develop a surface water quality control plan, to be implemented and approved by the City of Dixon. The plan shall include, but not necessarily be limited to reducing runoff contaminant concentrations by: • installing sediment and grease traps at all catch basins or within storm drain lines; • properly maintaining sediment and grease traps, with responsibility for maintenance assigned to site operations to be established by the project sponsors prior to completion of construction of the first phase of development; • incorporating infiltration facilities (porous pavement or grass swales) within the project to reduce peak flow of runoff; • reducing source pollution causes through practices such as minimal use of fertilizer, pesticides and herbicides, proper application of water for landscape irrigation, keeping roadways and parking lots free of litter and sediments, proper methods and locations for disposal of automobile hazardous wastes; and • maximizing distances between inlets and outlets perhaps using elongated basin shapes.	LS	Same – Proposed project will develop and implement a surface water quality control plan consistent with this mitigation measure and state law.
WQ-3: The project will cumulatively contribute to increased surface water runoff and degradation to surface water quality.	N/A	LS	Same – Proposed project will contribute to increased surface water runoff and degradation to surface water quality, however, impacts would continue to be less than significant through BMPs.
AQ-1: The NQSP will result in short-term construction impacts to air quality.	Measures to Reduce PM_{10} Although only the NOx emissions exceed the YSAQMD significance	LS	Same – Proposed project will result in short-term construction impacts to air quality, however, mitigation measures would reduce PM_{10}, O_3

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	thresholds, the following mitigation measures will help to minimize all short-term construction air quality impacts: AQ-A: The project construction site shall be watered at least two times per day. Emphasis shall be placed on the watering of unpaved roadways during periods of high vehicle movement. AQ-B: Tarpaulins or other effective covers shall be used on haul trucks when transferring earth materials. AQ-C: Where feasible, all inactive portions of the project construction site shall be seeded and watered until vegetation is grown. AQ-D: All disturbed soil areas not subject to revegetation shall be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the YSAQMD. AQ-E: Soils shall not be exposed, nor grading occur during periods where wind speeds are greater than 20 mph averaged over one hour. AQ-F: Vehicle speed shall not exceed a maximum of 15 mph on all unpaved roads. AQ-G: All roadways, driveways, and sidewalks shall be paved as soon as possible. In addition, building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. Measures to Reduce O_3 Precursors (ROG and NO_x) AQ-H: Proper maintenance of equipment and engines shall be maintained at all times. AQ-I: Vehicle idling shall be kept to an absolute minimum. As a general rule idling shall be kept below 10 minutes.		precursors (ROG and NO_x), and petroleum contamination of soils.

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	AQ-J: During smog season (April through October), the construction period shall be lengthened so as to minimize the number of vehicles and equipment operating at the same time. AQ-K: Construction activities should utilize new technologies to control ozone precursor emissions as they become available and feasible. Measures to Reduce Petroleum Contamination of Soils AQ-L: A site assessment shall be conducted before construction activities begin. At locations where petroleum contamination has occurred, the soils shall be remediated using appropriate techniques (Section 4.11, Public Health and Safety). Removal of petroleum contamination will also eliminate the generation of hydrogen sulfide and its associated odor. If unforeseen areas of subsurface contamination are encountered during excavation activities, grading shall be curtailed in the contaminated area until the area is evaluated and remediated as appropriate.		
AQ-2: Existing air quality in the project area currently exceeds the YSAQMD's threshold of significant for O_3 and PM_{10}.	None feasible	SU	Same – Proposed project will be located within the NQSP, and will result in growth consistent with the NQSP.
AQ-3: Long-term mobile sources of air pollution will result from implementation of the NQSP.	None feasible	SU	Same – Proposed project will result in growth consistent with the expectations of the NQSP.
AQ-4: The project plus future (2010) generated emissions will result in violations of ambient CO standards and a net increase of O3 precursors.	The following mitigation measures will help to reduce air quality impacts; however, this remains as a significant and unavoidable impact. AQ-M: Convenient access, such as shuttle services, to public transit systems shall be provided to encourage shoppers, employees and visitors to use mass transit, thereby reducing vehicle emissions.	SU	Same – Proposed project will result in long-term mobile sources of air pollution that will generate emissions in violations of ambient CO standards and a net increase in O_3 precursors. Mitigation measures AQ-M, AQ-P, and AQ-Q are not applicable to the proposed project.

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	AQ-N: Information shall be provided at various locations within the project site about carpool, vanpool, or transit use facilities. Incentives, such as parking stalls for carpool and vanpool vehicles shall also be exercised. AQ-O: Employee trip reduction and other applicable transportation control measures shall be developed. An annual report shall be prepared to document and demonstrate employee trip reduction. Mitigation Through Land Use Planning and Site Design AQ-P: Mixed land uses will reduce vehicle trips and vehicle miles traveled (VMT). Supportive land uses shall be sited within walking/biking distance of one another. AQ-Q: Support facilities to encourage modes of transportation other than the automobile shall include pedestrian and bicycle pathways. AQ-R: Parking lots, drive-through facilities, and egress/ingress areas shall be designed to reduce vehicle idling. Slow-moving or idling vehicles produce more emissions. AQ-S: Secure, convenient indoor or outdoor bike storage racks shall be provided at commercial centers, office buildings, and other places of employment. AQ-T: Street design standards, including landscape areas between the sidewalk and street, night lighting, safe islands in the center of major arterials, automatic street or pedestrian-activated "walk" signals, and adequate "walk" times, shall be enforced. AQ-U: PM_{10} emissions shall be reduced by curtailing fugitive dust through effective landscaping, and paving all		

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	vehicle roads and parking lots.		
AQ-5: Stationary sources of air pollution associated with energy generating.	N/A	LS	Less Impact – The proposed project will not generate stationary sources of air pollution associated with energy generating.
AQ-6: Airborne PM_{10} from adjacent agricultural operations.	AQ-V: An agricultural buffer is proposed on the east side of the project site.	LS	Less Impact – Proposed project will be located on the western portion of the NQSP. Mitigation measure AQ-V is not applicable to the proposed project.
AQ-7: Airborne PM_{10} from adjacent agricultural burning.	AQ-W: Air pollution control district regulate the timing and methods of field burning in order to reduce the impact on local and regional air quality. AQ-X: An agricultural buffer is proposed on the east side of the project site.	LS	Less Impact – Proposed project will be located on the western portion of the NQSP. Mitigation measures AQ-W and AQ-X are not applicable to the proposed project.
AQ-8: Cumulative emissions of ozone (O_3) precursors.	AQ-Y: • Establish a priority system favoring multi-rider vehicles. • Establish parking pricing strategies. • Maximize telecommunication, including appropriate network infrastructure. • Establish satellite offices when appropriate. (Applicable to office/industrial and educational institutions.) • Offer low-cost financing to employees for the purchase of telecommuting equipment or lend company-owned equipment. • Provide home-computer link to mainframe computer (via modem) so that employees may complete programming tasks or use computers at home. • Employer-sponsored subscription buses to supplement or substitute for public transit service. • Provision of shuttle bus service from an employment center to main transit lines, or during lunch hours to provide employees with access to shopping and restaurants. • Request minibus, jitney or other para-transit service within the project. • Request improvement and	SU	Same – Proposed project will result in growth consistent with the expectations of the NQSP, which will result in cumulative emissions of O_3 precursors. Mitigation measure AQ-Y is not applicable to the proposed project because it affects the design of the entire NQSP rather than a single component of the plan area. The mitigation also applies to large employer uses rather than a warehouse similar to the proposed project. The nature of goods movement requires employees to be at the warehouse rather than work from home.

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	possible relocation of an existing transit stop or station to serve both new and existing surrounding development. • Request dedication of bus turnouts or other street designs to accommodate bus travel under the subdivision ordinance. • Request amenities to increase the convenience and attractiveness of transit stops; i.e., waiting shelters, benches, secure bike parking, public telephone, and posted bus schedules. • Request convenient bus schedules to accommodate unusual schedules. • Request free or reduced transit fares for midday central business district trips. • Provide free bus transfers, free or low-cost bus fares, and bus transit passes. • Request construction of a transit center that will serve the future project and the community. • Request development of a park-and-ride lot.		
B-1: Project will result in the displacement of existing vegetation.	N/A	LS	Same – Proposed project will require displacement of vegetation in order for development to occur.
B-2: Proposed project will result in the removal of agricultural vegetation.	N/A	LS	Same – Proposed project will require ground-clearing activities in order for development to occur.
B-3: Project will result in the alteration of a seasonal freshwater marsh.	B-A: Prior to the issuance of improvement or development approvals by the City, a detailed wetland delineation should be conducted to precisely define seasonal wetland boundaries and acreage. Habitat values should also be qualified by type and condition of vegetation. B-B: Prior to the issuance of improvement or development approvals by the City, a chain link fence, or acceptable alternative, shall be installed around the seasonal wetland area. The fencing should not be removed until the completion of construction activities. Written release from the City Planning	LS	Same – Proposed project will implement buffers and fencing to reduce impacts to wetlands.

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	Department must be received prior to the removal of any fencing. B-C: Where practicable, the wetlands area should be avoided through land use planning. B-D: Preserved wetlands area should be protected from development by a 50-foot buffer or easement, so that the seasonal wetland continues to function in a natural state. Buffer widths would vary depending upon final configuration of adjacent proposed land uses. The wetlands area and buffer shall be dedicated as an open-space easement which prohibits structures, grading, and filling activities. In general, the following standards shall apply to the buffer and preserved wetlands area: • All sprinkler systems shall be designed so that no direct irrigation water reaches any portion of the preserve. Grass-lined swales shall be constructed at the margins of all turfed and irrigated areas that slope toward the buffer in order to intercept and prevent irrigation water from flowing into the wetlands area. • No mowing shall be allowed to occur in a wetland easement. • Surface water runoff from any paved surface shall be directed away from any intermittent tributary or swale which carries water to a wetland. B-E: If the removal or total destruction of the marshland area is unavoidable as a result of the project, after examination of all feasible avoidance alternatives, it may be required that the impacted wetland be mitigated at a 1:1 ratio so that no net loss of wetland habitat occurs. On-site mitigation is preferable, although off-site mitigation may be allowed.		
B-4: Project will cause a	N/A	LS	Same – Proposed project will develop within the NQSP and

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
disturbance to wildlife resources.			activities may cause a disturbance to wildlife resources.
B-5: Disturbance to Swainson's hawk habitat.	B-F: The following mitigation measures shall be required as part of a subsequent "construction-level" analysis, required before any construction can be implemented. The project will not substantially affect a special-status animal species or species' habitat. To ensure this, a breeding survey shall be conducted between April and July in order to: • Determine if the species nest on the project site; • To develop appropriate mitigation measures, which may include a 1:1 replacement ratio of impacted foraging habitat. This replacement habitat should Include alfalfa and row crops such as tomatoes, oats, wheat, barley, and sugar beets. B-G: Project proponents shall participate in a County wide Habitat Management Plan as appropriate. Also, the Dixon General Plan Update EIR's mitigation measure for wildlife impact requires developer participation in a Habitat Mitigation Plan.	LS	Less Impact – Portions of the proposed project would disturb Swainson's hawk habitat. Mitigation measure B-F would apply to the project and require 1:1 mitigation of the foraging habitat resulting in approximately 39.7 acres of mitigation through either a) mitigation fee payment to a CDFW-approved mitigation bank or similar habitat development and management company, or the City of Dixon through a negotiated agreement (subject to CDFW approval) or b) purchase of conservation easements or fee title on lands with suitable Swainson's hawk foraging habitat (consistent with CDFW guidelines). This mitigation will be expanded to include all migratory birds to comply with the MBTA. The mitigation obligation may also be met through participation in the Countywide Habitat Mitigation Plan as required by mitigation measure B-G.
B-6: Project may cause a disturbance to California tiger salamander habitat.	B-F: No tiger salamanders were observed to occupy the wetland area of the project site during the field surveys. However, the following mitigation measure shall be required as part of a subsequent "construction-level" analysis, required before any construction can be implemented. The project will not substantially affect a special-status animal species or species' habitat. To ensure this, a field survey shall be conducted during the spring months in order to: • Determine if the species occurs on the project site; • To develop appropriate mitigation measures.	LS	Same – Proposed project will conduct field surveys during the spring months.
B-7: Project may result in a disturbance to habitat of the northern harrier, black-shouldered kite and tri-colored blackbird.	B-I: The following mitigation measures shall be required as part of a subsequent "construction-level" analysis, required before any	LS	Same – Proposed project will participate in a County-wide Habitat Management Plan addressing the loss of potential foraging habitat.

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	construction can be implemented. The project will not substantially affect a special-status animal species or species' habitat. To ensure this, project proponents shall participate in a County-wide Habitat Management Plan addressing the loss of potential foraging habitat, as appropriate.		
B-8: Project will contribute to a cumulative loss of seasonal freshwater marsh.	N/A	LS	Less Impact – Proposed project is located adjacent to the seasonal freshwater marsh; no loss will occur as a result of project implementation.
B-9: Project will contribute to a cumulative disturbance to Swainson's hawk habitat.	N/A	LS	Less Impact – Portions of the proposed project would not disturb Swainson's hawk habitat.
C-1: Potential damage to undiscovered cultural resources.	C-A: Consultant with qualified archaeologist if buried archaeological deposits are discovered during construction.	LS	Same – Proposed project would consult with a qualified archaeologist is archaeological deposits are discovered during construction.

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
C-2: Construction of the project will result in destruction of Vaughn House.	C-B: Future development shall be required to preserve, avoid, or relocate the Vaughn House to a new location. If neither avoidance nor moving the structure is ultimately feasible for the Vaughn House, then the structure shall be fully recorded before demolition.	LS	Less Impact – The Vaughn House is no longer located within the NQSP area. This mitigation does not apply to the proposed project.
C-3: Construction of the project will result in destruction of Dudley House.	C-C: Future development shall be required to preserve, avoid, or relocate the Dudley House to a new location. If neither avoidance nor moving the structure is ultimately feasible for the Dudley House, then the structure shall be fully recorded before demolition.	LS	Less Impact – The Dudley House is no longer located within the NQSP area. This mitigation does not apply to the proposed project.
C-4: Cumulative impact to archaeological and historic resources.	N/A	LS	Less Impact – Proposed project will result in less of an impact to historic resources; impacts to archaeological resources remain the same.
T-1: Existing intersections and streets within the project area currently function within a level of service in conformance with the City's policies.	N/A	LS	Same – As traffic from development similar to the proposed project was evaluated in the EIR, and the proposed project does not exceed the estimated traffic numbers, impacts associated with the project would be the same as originally evaluated.
T-2: The NQSP establishes land use patterns and circulation concepts that must conform with the Dixon General Plan and the Solano County Congestion Management Plan.	T-A: Future development shall comply with design guidelines included in the NQSP, ensuring that the project will comply with transportation congestion management and circulation policies in the General Plan and Solano County Plan.	LS	Same – Proposed project will implement and comply with the design guidelines included in the NQSP. The proposed project does not include the addition of any roadway.
T-3: The existing traffic conditions, plus the traffic generated by the NQSP will exceed the required LOS at four intersections. All intersections will warrant signalization.	T-B: All intersections identified in the EIR would warrant signalization. A specific analysis shall be prepared as part of any future development to determine the specific signalization required at the fair share contribution to funding such improvements. T-C: Improve the Pedrick Road interchange with Interstate 80. Separate studies, such as Route Concept Approval Studies and Project Study Reports, should be performed in cooperation with Caltrans to determine the ultimate improvements to the interchange and mainline I-80. T-D: Improve the North First Street	LS	Same – Proposed project will result in traffic, consistent with the expectations of the NQSP. The daily trip generation stated in the certified EIR was 99,124 trips, the developed uses on the NQSP area have a daily trip generation of 12,717 trips. The proposed project will result in 1,001 daily trips; thus, 85,406 daily trips remain after the implementation of the proposed project. The intersection of North First Street and East Dorset Drive was signalized as part of the Walmart project. No new roadways would be built with the proposed project. The project will pay its fair share share of improvement costs.

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	interchange with Interstate 80. Separate studies such as Route Concept Approval Studies and Project Study Reports, should be performed in cooperation with Caltrans to determine the ultimate improvements to the interchange and mainline 1-80. Direct access should be provided from the interchange ramps into the project site to avoid additional travel on the local street system. T-E: Construct additional turn lanes at the North First Street/ Arterial B intersection. Double left turn lanes are required for the southbound approach of North First Street and the westbound approach of Arterial B. Double right turn lanes are also required for the eastbound approach of Arterial B.		The project does not access Pedrick Road so mitigation measure T-C does not apply. Mitigation Measures T-D and T-E were implemented with construction of the Walmart project.
T-4: The existing plus project conditions will result in unacceptable levels of service for various road segments.	T-F: Widen North First Street to six lanes between Interstate 80 and Arterial B. T-G: Widen Pedrick Road to six lanes between Interstate 80 and Professional Drive. The above improvements should be implemented when the peak hour volume on the subject roads exceed 3,600 vehicles per hour. T-H: Contribute to improvements on Interstate 80 adjacent to the project site. A Route Concept Approval Study should be performed in cooperation with Caltrans to determine the ultimate improvements to Interstate 80. The project proponent shall contribute a fair share amount toward these improvements.	LS	Same – Proposed project will result in growth, and therefore, traffic, consistent with the expectations of the NQSP. The daily trip generation stated in the certified EIR was 99,124 trips, the developed uses on the NQSP area have a daily trip generation of 12,717 trips. The proposed project will result in 1,001 daily trips; thus, 85,406 daily trips remain after the implementation of the proposed project. As shown in Table 6, the project would not exceed the 3,600 per hour threshold to trigger mitigation measures T-F and T-G. The project is responsible for its fair share of Interstate 80 improvements as required by mitigation measure T-H.
T-5: Implementation of the project would introduce significant development to an area not directly served by public transit.	N/A	LS	Same – Proposed project, located within the NQSP area, will not be served directly by public transit; the proposed project will result in growth consistent with the expectations of the NQSP.
T-6: Implementation of the project would increase traffic volumes on surrounding streets which are planned to be used by bicyclists	T-I: Ensure Safety in the Design of Road Improvements. Design and implementation of roadway improvements shall ensure safe and	LS	Same – Proposed project will result in growth, and therefore, traffic, consistent with the expectations of the NQSP. The daily trip generation

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
and pedestrians.	efficient movement of bicyclists and pedestrians, including sidewalk paths, bicycle lanes and signalized crosswalks at major intersections, in accordance with City standards. T-J: Implementation of the project includes a bikeway and pedestrian trail system for public use.		stated in the certified EIR was 99,124 trips, the developed uses on the NQSP area have a daily trip generation of 12,717 trips. The proposed project will result in 1,001 daily trips; thus, 85,406 daily trips remain after the implementation of the proposed project. Mitigation measure T-J is not applicable to the proposed project.
T-7: The cumulative traffic impact in the City of Dixon without the development of the NQSP will require significant improvement to the interchanges of I-80 and Pedrick Road and North First Street, and to sections of both North First Street and Pedrick Road.	T-K: The mitigation of traffic impacts associated with the cumulative - no project scenario would not be the responsibility of the proposed project. Therefore, no mitigation measures have been identified. However, it can be assumed that other projects that make up the cumulative scenario would be responsible for mitigating this impact, and that funding such improvements would be based on a "fair share" assessment based on all future development.	LS	Same – Proposed project will fund improvements based on its “fair share;” cumulative-no project scenario traffic impacts will not be the responsibility of the project applicant.
T-8: The cumulative traffic conditions would exceed LOS at six intersections.	T-L: Improve the Pedrick Road interchange with Interstate 80. Separate studies, such as Route Concept Approval Studies and Project Study Reports, should be performed in cooperation with Caltrans to determine the ultimate improvements to the interchange and mainline I-80. T-M: Improve the North First Street interchange with Interstate 80. Separate studies, such as Route Concept Approval Studies and Project Study Reports, should be performed in cooperation with Caltrans to determine the ultimate improvements to the interchange. Direct access should be provided from the interchange ramps into the project site to avoid additional travel on the local street system. T-N: Construct additional turn lanes at the North First Street/Arterial B intersection. Double left turn lanes are required for the southbound approach of North First Street and the westbound approach of Arterial B. Double right turn lanes are also required for the westbound approach of Arterial B.	LS	Same – Proposed project will contribute to the cumulative traffic conditions; impacts will be reduced through mitigations. The daily trip generation stated in the certified EIR was 99,124 trips, the developed uses on the NQSP area have a daily trip generation of 12,717 trips. The proposed project will result in 1,001 daily trips; thus, 85,406 daily trips remain after the implementation of the proposed project. The proposed project will not access Pedrick Road therefore mitigation measure T-L would not apply. Improvements to North First Street were made with the construction of Walmart, and no new roadways are needed to serve the proposed project. The project will be subject to pro-rata fees for future improvements.

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	These improvements, along with the provision of direct site access from the I-80 interchange will improve the operations of the intersection. T-O: Construct additional turn lanes at the North First Street/Vaughn Road intersection. Double left turn lanes are required for the southbound approach of North First Street and the eastbound approach of Vaughn Road. These improvements, along with the provision of direct site access from the I-80 interchange will improve the operations of the intersection.		
T-9: The cumulative traffic scenarios for 2010 will result in unacceptable levels of service for various road segments.	T-P: Widen North First Street to six lanes between Interstate 80 and Arterial B. T-Q: Widen Pedrick Road to six lanes between Interstate 80 and Professional Drive. T-R: Contribute to improvements on Interstate 80 adjacent to the project site. A Route Concept Approval Study should be performed in cooperation with Caltrans to determine the ultimate improvements to Interstate 80. The project proponent shall contribute a fair share amount toward these improvements. T-S: The Pedrick Road Overcrossing of the railroad tracks is mentioned in the General Plan as a possible location to be considered as a part of a separate study. The overcrossing, if implemented, would cross over the railroad tracks and would not affect the traffic forecasts. This shall be considered with all future cumulative development implementing this project.	LS	Same – Proposed project will result in growth, and therefore, traffic, consistent with the expectations of the NQSP; traffic impacts will not worsen beyond what was previously identified in the EIR. The daily trip generation stated in the certified EIR was 99,124 trips, the developed uses on the NQSP area have a daily trip generation of 12,717 trips. The proposed project will result in 1,001 daily trips; thus, 85,406 daily trips remain after the implementation of the proposed project. A partial widening of North First Street occurred with construction of the Walmart. Based on the amount of existing traffic, no further improvements are warranted. The project does not gain access from Pedrick Road, and is not near the future railroad overcrossing, therefore mitigation measures T-Q and T-S do not apply. The project is subject to fair share costs of improvements.
T-10: Since the site is not in the City of Dixon, it is not directly served by public transit.	N/A	LS	Same – The project site is within city limits, however, it is not directly served by public transit.
T-11: Implementation of the project would increase traffic volumes on surrounding streets which are planned to be used by bicyclists and pedestrians.	T-T: Ensure Safety in the Design of Road Improvements. Design and implementation of roadway improvements shall ensure safe and efficient movement of bicyclists and pedestrians, include sidewalk paths,	LS	Same – Proposed project will result in traffic, consistent with the expectations of the NQSP; mitigation will reduce impacts to bicyclists and pedestrians. The proposed project does not include any roadway

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	bicycle lanes and signalized crosswalks at major intersections, in accordance with City standards.		improvements.
T-12: Implementation of the project includes a bikeway and pedestrian trail system for public use.	N/A	LS	Same – Proposed project will not interfere with the implementation of a bikeway and pedestrian trail system. No new roadways will be constructed as part of the proposed project.
T-13: Project could contribute to cumulative increase in average daily traffic on County roads adjacent to the site.	T-U: A master traffic improvement plan shall be prepared for the City and County roads around the City. The improvement plan will identify: 1. What additional facilities will be required to mitigate the increased traffic. 2. Responsibility and time line for construction of these facilities. 3. Responsibility for the maintenance of these facilities. 4. Funding costs of the facilities.	LS	Same – Proposed project will participate in funding adopted by the City for area improvements.
T-14: Project could impinge on the necessary right-of-way for future interchange improvements.	T-V: Prior to approval of a final location for the "Flying J" facility or any other development, right-of-way requirements for the Pedrick Road/I-80 Interchange (as well as mainline I-80) must be determined in order to preserve the necessary right-of-way.	LS	Same – The proposed project is not adjacent to the interstate and would not affect any future expansion of the interchange.
N-1: Short-term construction noise impacts associated within the NQSP.	N-A: All contractors shall comply with local, state and federal noise regulations, including fitting all equipment with mufflers according to the manufacturer's specifications. N-B: Construction activities shall not take place between 7:00 p.m. and 7:00 a.m. on weekdays and Saturday, and shall not be permitted on Sunday or on federal holidays.	LS	Same – Proposed project will comply with noise regulations, and construction activities will take place within hours in which construction is permitted. Temporary construction activities could generate noise levels up to 89 dBA at a distance of 50 feet; however, the City of Dixon Municipal Code exempts temporary construction and demolition work from its noise performance standards.
N-2: Long-term noise impacts associated with traffic.	N-C: Future development shall comply with the City of Dixon. Development criteria in the NQSP shall be required to demonstrate conformance with the City's noise standard or site specific mitigation measures to ensure that noise thresholds are not exceeded.	LS	Same – Proposed project will comply with the City of Dixon's noise standards. The proposed project is a permitted use under the current zoning designation, and is consistent with growth expectations of the NQSP. The proposed project will not result in increasing the severity or introduce new significant noise impacts.
N-3: On-site noise.	N-D: Residential land uses are not proposed for this project. Commercial	LS	Same – Proposed project will not introduce residential uses to the

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	and office uses located within the proposed year 2010 70 CNEL noise contour, and industrial uses proposed within the 75 CNEL noise contour, shall be sited and designed to be sensitive to the adjacent I-80 noise source by incorporating appropriate building materials and design techniques to improve both the interior and exterior noise environment. In addition, the use of landscape barriers shall be explored to reduce noise levels adjacent to I-80.		project site; proposed project will comply with noise contour levels and incorporate appropriate building materials, design techniques, and landscape barriers, as applicable. The project site is not located within the 70 or 75 CNEL noise contour of I-80.
N-4: Cumulative noise impacts.	N/A	LS	Same – Proposed project will contribute to cumulative noise impacts identified by the NQSP.
PS-1: Approximately half of the NQSP land area is currently not within the NFSA or the Dixon Solano Water Service and does not have access to a municipal water system.	PS-A: Prior to development of any property in the NQSP the affected parcels would have to be annexed to the district in order to receive domestic water service from the DSMWS.	LS	Less Impact – Proposed project area is within the NFSAD. This mitigation measure does not apply to the proposed project.
PS-2: Implementation of the NQSP would generate a substantial need for domestic water, increasing current municipal water storage requirements.	PS-B: Prior to the issuance of a building permit, the project proponent shall obtain evidence that a water supply is available to meet the minimum demand (2.3 mgd) of the project and submit this evidence (will serve letter) to the City of Dixon.	LS	Same – Proposed project area is within the NFSAD; the proposed project will provide evidence, that a water supply to meet the minimum demand for the proposed project is available, to the City.
PS-3: Implementation of cumulative development in the area would generate the need for additional water supply, conveyance, treatment, and storage facilities and services.	PS-B(1): Prior to the issuance of a PUD for any project that will exceed ten percent (10%) of the total land area in the NQSP the "North Central Solano County Groundwater Resources Report" shall be completed to indicate whether a water supply is available to meet the minimum demand of the proposed project and submit this evidence (will serve letter) to the City of Dixon.	LS	Same – Proposed project will result in the need for additional water supply, conveyance, treatment, and storage facilities and services consistent with the expectations of the NQSP.
PS-4: Buildout of the proposed NQSP would generate an average flow of 694,320 gpd and a peak of approximately 1.7 mgd of wastewater. Existing wastewater collection infrastructure would need to be extended to serve the project site.	PS-C: Prior to the issuance of a building permit, evidence that the City's wastewater treatment plant has capacity to accommodate the proposed project shall be submitted to the City of Dixon. PS-D: Prior to the issuance of a building permit, the 60 acres of the project site located east of Pedrick Road shall be annexed into the service district boundaries of the city's sewer service area.	LS	Same – Wastewater infrastructure was extended to serve commercial development and is available for proposed project.

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
	PS-E: The project proponent shall be responsible for contributing to the appropriate hook-up fees to help offset the costs of necessary sewage treatment facility expansions. In addition, the project proponent shall be responsible for the construction of sewer lift stations, sewer mains and any other facility improvements deemed necessary to serve the proposed project.		
PS-5: Implementation of cumulative development in the area would generate wastewater which would need to be treated at the City of Dixon wastewater treatment plant.	N/A	LS	Same – Wastewater generated by the proposed project will be consistent with the expectations of the NQSP; the wastewater treatment facility expansion plans, identified in the 1995 EIR, would increase the capacity of the treatment facility.
PS-6: Implementation of construction activities would generate lumber, sheetrock, and other scrap materials during construction. In addition, implementation of the proposed project would generate approximately 138,992 pounds of solid waste per day.	PS-F: Prior to final map approval, the project proponent shall submit a construction waste; commercial and industrial; and an open space waste recycling program for long-term handling of recycled waste from the project site. PS-G: The project proponent shall provide provisions for an on-site recycling center for commercial and industrial uses. In addition, adequate collection facilities for recyclable materials shall be located throughout the project site including outside storage and collection containers. PS-H: Grass clippings, prunings and other organic waste resulting from open space maintenance are classified as clean waste and shall be made available for composting or recycling.	LS	Same – Construction activities and solid waste generation of the proposed project will be consistent with the expectations of the NQSP.
PS-7: Implementation of cumulative development in the area would generate solid waste which would need to be disposed of in the B & J Landfill.	N/A	LS	Same – Proposed project will generate waste, consistent with the expectations of the NQSP, which will be disposed in the B & J Landfill (Recology Hay Road) which has a cease operation date of January 1, 2077.
PS-8: The substantial increases in employees and structures associated with implementing the NQSP would increase the demand for fire protection and emergency medical aid services provided by	PS-I: Prior to recordation of a final map or issuance of a grading permit, the project proponent shall either dedicate land for a fire station and provide financial contributions toward equipment and/or personnel or shall participate in	LS	Same – Proposed project will prepare an emergency plan and plan showing required hydrant locations and fire flow calculations to the City of Dixon and Dixon Fire Department. The proposed project will contribute

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
the Dixon Fire Department and Foothill Ambulance.	establishment of an assessment district in which all property owners in the area would dedicate funds towards establishment of adequate fire protection facilities. PS-J: Prior to the issuance of building permits, the project proponent shall design and submit a plan to the Dixon Fire Department showing all required fire hydrant locations, detailed calculations to determine fire flow based on future structural design requirements, and access to all developed areas in accordance with city standards. PS-K: Prior to the issuance of building permits, the project proponent shall prepare and submit a plan for emergency response including details of each proposed facility and the business conducted, an inventory of hazardous materials handled or stored on-site and a training program for employees.		to fire service impact fees.

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
PS-9: Cumulative development in the area would impact existing fire protection and emergency medical aid services.	N/A	LS	Same – Proposed project will introduce growth that will be consistent with the expectations of the NQSP; therefore, impacts to fire protection and emergency services will be within what was predicted by the NQSP.
PS-10: Implementation of the proposed project would increase the daily population in the City of Dixon which would generate additional traffic on local roadways. Implementation of the project would also generate additional traffic accidents, vehicle thefts, office burglaries, vandalism, and personal disputes.	PS-L: Prior to final map approval or issuance of a building permit, the project proponent shall request the city to commit to increase funding for necessary police services and required equipment. The city shall also verify that funding can be increased during buildout of the proposed project, through either a combination of impact fees imposed on new development and/or an increase in general fund allocations. In any event, the project proponent shall be responsible for paying its fair share for additional staff and equipment to serve the project site. This shall be established prior to occupancy of any structure occupying the project site. PS-M: The project proponent shall be responsible for providing an on-site private security staff to adequately serve the proposed project. This staff would be responsible for securing future structures and providing security in parking lots during and after normal business hours.	LS	Same – While the proposed project does not include new homes that would add population to the City, traffic associated with the development would be similar to what was evaluated in the EIR.
PS-11: Cumulative development in the area would impact existing police protection services.	N/A	LS	Same – Proposed project will introduce growth that will be consistent with the expectations of the NQSP; therefore, impacts to police protection services will be within what was predicted by the NQSP.
PS-12: Implementation of the proposed project would increase the daily population in the City of Dixon, however, it would not directly increase student enrollment at any of the existing educational facilities.	PS-N: The project proponent shall be responsible for paying $0.27 per square feet of commercial and industrial development consistent with Assembly Bill 2926, which requires the contribution of developer's fees to fund future educational facilities.	LS	Same – Project applicant will pay current developer fees to fund educational facilities.
PS-13: Implementation of cumulative development in the area could impact existing educational facilities and services.	N/A	LS	Same – Proposed project growth will be consistent with the expectations of the NQSP; the applicant will pay current developer fees to mitigate

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
			impacts to educational services and facilities.
PS-14: Implementation of the proposed project would generate the need for electricity and natural gas services.	N/A	LS	Same – Electricity and natural gas services were extended to serve commercial development and are available for proposed project.
PS-15: The project will cumulatively contribute to the need for energy in the project area.	N/A	LS	Same – Proposed project growth will be consistent with the expectations of the NQSP; energy needs of the proposed project are accounted for by the NQSP.
PS-16: Implementation of the proposed project would generate the need for telecommunications services and facilities.	N/A	LS	Same – Telecommunication services and facilities were extended to serve commercial development and are available for proposed project.
PS-17: Implementation of the proposed project would involve construction of commercial, administrative office, and industrial uses and would not generate the need for additional public parks and recreational facilities. The need for private recreational facilities would be necessary for future employees who might want to exercise during lunch or in the evening.	N/A	LS	Same – Proposed project will include industrial uses, and therefore, will not warrant the need for additional public parks and recreational facilities.
PS-18: The project will have a minimal impact on cumulative park and recreation facilities.	N/A	LS	Same – Proposed project will have a minimal impact on cumulative park and recreation facilities as the proposed project will include industrial uses, not residential uses.
VR-1: Implementation of the proposed project would result in the elimination of views of the existing open space and agricultural uses.	N/A	LS	Same – Commercial development exists on the NQSP area which eliminates views of existing open space and agricultural uses as well as portions of the proposed project. The proposed project will partially eliminate views of open space and agricultural uses.
VR-2: Development of the proposed project would change existing views from I-80, North First Street, Vaughn Road and Pedrick Road.	N/A	LS	Same – Similar to the existing commercial development, the proposed project will alter views from I-80, First Street, Vaughn Road, and Pedrick Road. The NQSP includes special landscaping and design guidelines and screening provisions, which the proposed project would implement.
VR-3: Implementation of the proposed project would generate daytime glare and reflections off	VR-A: Bare metallic surfaces such as pipes, vents, gutters, and flashings shall be painted or concealed from view in a	LS	Same – Proposed project will generate glare and reflections, and nighttime lighting; proposed project

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
building finishes and vehicles in parking lots. In addition, the project would result in an increase in nighttime lighting from adjacent locations and scenic highways.	manner harmonious to the structure. All flashing and sheet metal must be treated to match the adjacent materials. VR-B: Primary roofing materials shall be non-reflective. VR-C: Monolithic glass structures shall not be allowed unless used as a portion of a building to highlight an entry. VR-D: Building mass colors shall be of varied hues that minimize glare with bright colors limited to use around doors, trims, awnings and other pedestrian-oriented features.		will comply with design standards to reduce these impacts.
VR-4: The long-term visual aesthetic issues associated with implementation of cumulative development generally includes the replacement of visual qualities of natural and altered open space with urban uses associated with development.	N/A	LS	Same – Proposed project will alter visual qualities of natural and altered open space with urban development.
PH-1: Underground storage tanks presently exist on the project site.	N/A	LS	Same – The proposed project is not on the site of the former Dixon Livestock Auction Yard, however the relocated storm basin may be affected by previous underground tanks identified in the EIR. See Figure 4.1.1 Existing Land Uses of the EIR.
PH-2: Pesticides and herbicides may have been used on the project site.	PH-B: Soil samples in areas identified in the Preliminary Site Assessment shall be taken. These areas include locations where pesticides were stored, mixed and applied. PH-C: The entire site occupied by Mistier Trucking/Mistier Farm operations shall be excavated and surveyed for contaminants. A Level One Toxic's Analysis shall be prepared by a qualified geotechnical engineer to define the level of contamination and any required remediation techniques. This analysis shall be performed prior to grading or construction activities to reduce potential exposure of construction workers and the general public to hazardous materials.	LS	Less Impact – Proposed project will conduct sampling of soils; the proposed project is not located on portions of the NQSP area occupied by Mistier Trucking/Mistier Farms. Mitigation measure PH-C does not apply.

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
PH-3: Airborne pesticides and herbicides in the project vicinity could impact future development.	PH-D: The restrictions of the Solano County Agricultural Commissioner on pesticide and herbicide spraying shall be followed, especially conditions restricting the aerial spraying of specific chemicals in proximity to the project site. If regulations concerning pesticide and herbicide spraying are not being enforced effectively, the Cal-EPAs Department of Pesticide Regulation shall be notified and enforcement action requested.	LS	Same – Proposed project will use pesticides or herbicides only in accordance with local, state, and federal regulations.
PH-4: Hazardous materials may be used and stored in association with future development.	PH-E: A hazardous waste reduction program shall be prepared prior to leasing a portion of the site to a business handling hazardous materials. The goal of the hazardous waste reduction program is to reduce the project site's contribution to hazardous waste generation and disposal. This program shall consider the wastes generated by the occupants of the site, except for occupants required by law to implement similar programs because they generate substantial quantities of hazardous waste greater than those triggering the legal requirements for waste minimization.	LS	Same – While the proposed project is not intended to handle hazardous waste, the mitigation measure will remain.
PH-5: The possibility for future problems from oil and gas wells that have been plugged and abandoned, or abandoned, to the Division's current specifications are remote, but should none the less be considered.	PH-F: Diligent effort shall be made to avoid building over any plugged and abandoned well. If construction over an abandoned well is unavoidable, an adequate gas venting system shall be placed over the well.	LS	Same – Proposed project will ensure that construction over abandoned wells is avoided or an adequate gas venting system is placed over the well, if construction over an abandoned well is unavoidable.
PH-5: Cumulative impacts to public health and safety.	N/A	LS	Same – Proposed project uses will be consistent with the expectations of the NQSP; impacts to public health and safety will be reduced through the implementation of mitigation measures.
GI-1: The project will indirectly generate a daytime population increase of approximately 11,000 people.	N/A	LS	Same – Proposed project will result in growth consistent with the expectations of the NQSP.

3. Project Description

Table 3 Mitigation Measure Summary Table

Impact	Mitigation Measure	Resulting Impact NQSP	Proposed Project
GI-2: The project would contribute to the need for expanded capacity at the City's wastewater treatment plant.	N/A	LS	Same – Wastewater generated by the proposed project will be consistent with the expectations of the NQSP; the wastewater treatment facility expansion plans, identified in the 1995 EIR, would increase the capacity of the treatment facility.
GI-3: The project could cause growth-inducing effects on adjacent agricultural land.	None feasible	SU	Less Impact – The project site is surrounded by land that is designated for urban development consistent with the NQSP.

N/A = Not Applicable; LS = Less Than Significant; SU = Significant and Unavoidable.

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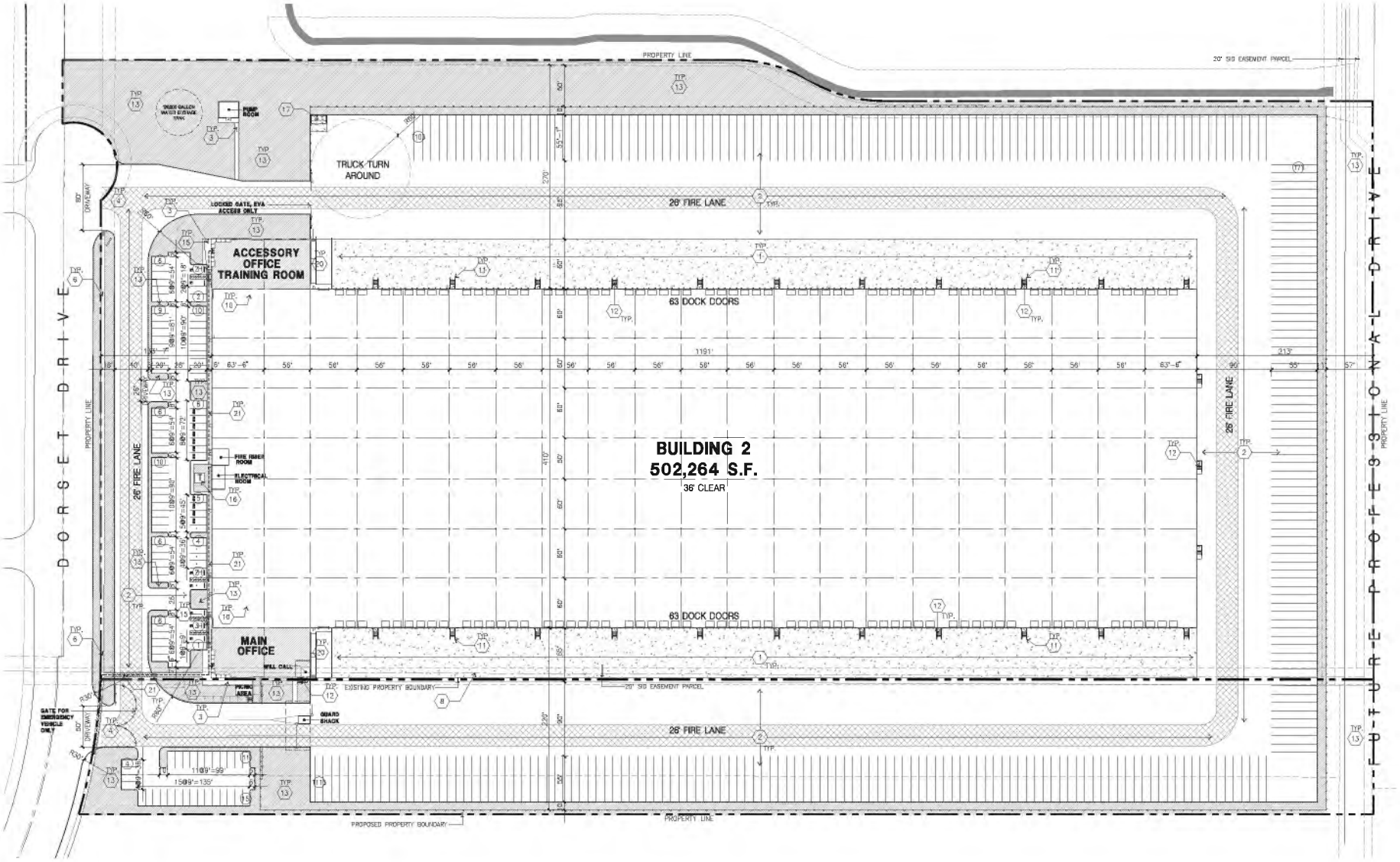

0 180
Scale (Feet)

Source: HPA Architecture, 2018

Figure 4
Conceptual Site Plan

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Source: HPA Architecture, 2018

Figure 5
Conceptual Building Elevations

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4. Environmental Analysis

4.1 METHODOLOGY

4.1.1 Traffic

As the proposed project is clearly within the NQSP area, and is precisely the type of development evaluated in the EIR, this Addendum evaluates whether there have been changes to the project area and/or regulatory environment since certification of the EIR that might result in new or more severe environmental impacts. Similar warehousing to the proposed project is included in the 10th Edition of the Institute for Traffic Engineers Manual (ITE) code 154. As large trucks can be assumed at the facility, a passenger care equivalent (PCE) is used to assist in the determination of total daily trips. Table 4 shows the standard, and the PCE, number of trips associated with the proposed project. Table 5 shows the vehicle mix and associated PCE factors.

Table 4 Trip Generation Rates

Land Use	Unit[2]	Trip Generation [1]						
			AM Peak Hour			PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
High Cube Transload and Short-term Storage Warehouse (ITE 154)	TSF	1.4	0.06	0.02	0.08	0.03	0.07	0.10
Proposed Project	**TSF[2]**	**Trip Generation [1]**						
			AM Peak Hour			PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
Project Trips (Vehicles)	502	703	31	9	40	14	36	50
Project Trips (PCE) [3]	502	1,001	44	12	56	20	51	71

[1] Trip generation rates for peak hour of adjacent streets, per the ITE Trip Generation Manual 10th Edition.
[2] Thousand Square Feet
[3] Passenger Car Equivalent

Table 5 Vehicle Mix and PCE Factors

	Type of Vehicle[1]					
	Passenger Car	2-Axle Truck	3-Axle Truck	4+ Axle Truck	Total Truck	Total
High Cube Warehouse - Transload[3]	70.0%	7.0%	7.0%	16.0%	30.0%	100%
PCE Factor[2]	1.0	1.5	2.0	3.0		

[1] Vehicle mix source: SCAQMD High Cube Warehouse Trip Generation Study 2016.
[2] Passenger Car Equivalent factors are recommended by the San Bernardino Associated Governments (Sanbag 2005).
[3] Industrial park mix applies for areas containing a number of industrial or related facilities.

Using current ITE generation rates, the estimated trips from projects that have been completed within the NQSP were estimated (see Appendix D). These figures were subtracted from the trips analyzed in the EIR as shown in Table 6.

Table 6 Trips Summary

	Trip Generation						
		AM Peak Hour			PM Peak Hour		
Land Use	Daily	In	Out	Total	In	Out	Total
Approved EIR	99,124	4,933	2,893	7,826	4,139	5,644	9,783
Developed Uses	12,717	423	332	756	493	527	1,021
Remaining Trip Budget	**86,407**	**4,510**	**2,561**	**7,070**	**3,646**	**5,117**	**8,762**
Project	**1,001**	**44**	**12**	**56**	**20**	**51**	**71**
Remaining after Proposed Project	**85,406**	**4,466**	**2,549**	**7,014**	**3,626**	**5,066**	**8,691**

The trip generation figures were used for the air quality, health risk assessment, greenhouse gas analysis, and noise evaluation for the proposed project. As shown in the tables, the proposed project represents approximately 1.2 percent of the remaining trip budget, and roughly 1 percent of the total daily trips assumed for the NQSP. The percentage of traffic associated with the proposed project represents a small fraction of the total traffic evaluated in the EIR, and therefore no additional traffic analysis is necessary.

The EIR includes several mitigation measures intended to improve the circulation network as development occurs within the NQSP. Some of thee improvements, particularly along North First Street (SR 113) were completed with construction of the Walmart. These included additional lanes on First Street and the extension of East Dorset Drive that provides access to the project site. The intersection and East Dorset Drive improvements were constructed to the ultimate width intended for full buildout of the NQSP. Improvements to North First Street are required by Mitigation Measure T-F but are only triggered when vehicle trips exceed 3,600 per hour. As shown in Table 6, the existing+project traffic does not exceed the hourly threshold in either the AM or PM peak hour. Regardless, mitigation measure T-B requires that the proposed project pay its fair share circulation improvements at time of building permit.

4.1.2 Air Quality

The air quality analysis (see Appendix A) evaluates the impacts of the Proposed Project based on the guidance, methodologies, and significance thresholds recommended in the Yolo-Solano Air Quality Management District (YSAQMD) Handbook. The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. "Emission" refers to the actual quantity of pollutant, measured in pounds per day. "Concentration" refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). Emissions generated by the Proposed Project are compared to that of the remaining development capacity of the Approved Project in order to determine if the Proposed Project would result in new significant

environmental effects or a substantial increase in the severity of previously identified significant effects per Section 15162 of the CEQA Guidelines.

Transportation emissions are based on average daily vehicle trips for the Proposed Project and the NQSP, compiled by PlaceWorks (See Table 4). A truck trip length of 60 miles per trip is based on the distance measured from the project site to the Port of Oakland. Emissions of the Proposed Project and the remaining development capacity associated with the Approved Project are modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Criteria air pollutant and GHG emissions modeling for construction and operational phases of the Proposed Project and operation of the remaining development capacity of the Approved Project is in the appendices of this technical memorandum.

4.1.3 Health Risk Assessment

The health risk assessment (HRA) was conducted in accordance with relevant and appropriate procedures of the US Environmental Protection Agency (USEPA), California Environmental Protection Agency (CalEPA), Office of Environmental Health and Hazard Assessment (OEHHA), and YSAQMD. (See Appendix A) Guidance from these agencies recommends completion of health risk assessments to determine the impacts of hazardous air emissions upon sensitive receptors in the vicinity of the project. This HRA considers the health impact to sensitive receptors (e.g., children at the nearby residences) of operational phase emissions from diesel particulate matter (DPM) from Project-related trucks. Nearby off-site sensitive receptors in close proximity to the project site includes residences to the southeast and southwest. The AERMOD atmospheric dispersion model was performed to concentration of emitted compounds on sensitive receptors near the project. The California Air Resources Board's Hotspots Analysis and Reporting Program (HARP2) Risk Assessment Standalone Tool, Version 18159, was used to calculate the cancer risk values.

4.1.4 Biological Resources

A qualified biologist evaluated the site to determine if there were significant changes since certification of the EIR. During the January 21, 2019, site visit 1 burrowing owl was found on the western slope of the detention pond; there are many ground squirrels burrows around the pond. The detention pond supports small patches of wetland vegetation, but since it is a constructed feature and not hydrologically connected to an existing water of the U.S., it isn't jurisdictional. There are no other aquatic features (e.g. potential waters of the U.S.) onsite. The farmed fields will be considered Swainson's hawk foraging habitat, and the wetland patches in the detention pond could support a few special-status plants. As with all projects in California, nongame native birds (resident and migratory) and the nests and eggs of all birds of are protected under the California Fish and Game Code and all migratory birds are protected under the Migratory Bird Treaty Act (MBTA). Compliance with the MBTA requires preconstruction surveys if construction occurs between February 1 through August 31. This is similar to mitigation measure B-F that requires a construction-level analysis to ensure that Swainson's hawks are not affected.

One burrowing owl was found onsite during the site biological assessment. As a result, pre-construction surveys will likely be required similar to mitigation measure B-F. If burrowing owls are found occupying the site during the non-breeding season (September 1 through January 31), the owls could be excluded in

accordance with CDFW protocol (e.g., passive relocation). Passive relocation is generally not permitted during the breeding season (February 1 through August 31); a no-disturbance buffer will likely be required around the occupied burrow during the breeding season. This radius would be maintained until a qualified biologist has determined that the nestlings have fledged.

Since certification of the EIR, the City has participated in the Solano Habitat Conservation Plan (HCP) which establishes a framework for complying with State and Federal endangered species regulations while accommodating future urban growth, development of infrastructure, and ongoing operations and maintenance activities associated with flood control, irrigation facilities, and other public infrastructure undertaken by or under the permitting authority/control of the Plan Participants within Solano County over the next 30 years. As the HCP was being prepared when the NQSP was being considered, the EIR includes mitigation measure B-7 that requires the proposed project to participate in the HCP. This would include pre-construction surveys, and adherence to the requirements of the HCP. The HCP is not yet adopted as the Environmental Impact Statement has not been completed. The EIR contains mitigation measures that address impacts of the proposed project in the interim until formal adoption of the HCP.

4.2 ANALYSIS

Section 15162 of the CEQA guidelines state that when an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, that one or more of the following findings cannot be made. The text in italics that follows the provisions of the law relate to the proposed Housing Element.

1. **No substantial changes are proposed in the project which would require major revisions of the previously certified EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.**

The proposed project would allow for light industrial development in an area of the City planned for this type of development as shown in the NQSP. The EIR evaluated 2.3 million square feet of light industrial development of which only 62,300 square feet has been constructed. Building aesthetics are similar to those of other industrial buildings, and of the adjacent Walmart Supercenter. The existing roadway and utility network is adequate to serve the proposed project, and the relocation and expansion of the stormwater basin will ensure that stormwater runoff is accommodated to current standards. As shown in Table 3, the project is consistent with the analysis contained in the EIR and this type of development was anticipated by the NQSP.

2. **The project will have one or more significant effects not discussed in the previously certified EIR or negative declaration.**

The proposed project trip generation was calculated using the x edition of the Institute of Traffic Engineers Manual (ITE) to determine if the anticipated trips were within the estimates as evaluated by the EIR. The analysis shows that the projected 1,001 trips is below the estimated 86,407 daily trips evaluated in the EIR. The type of trips is also similar to those evaluated in the EIR, with an emphasis on heavy trucks associated with the light industrial use. Using the current trip generation, air quality, greenhouse gas, noise, and health risk were calculated (See Appendices A through E to this Addendum), and all found to be less than current thresholds. A biological reconnaissance of the project site was conducted on January 21, 2019, and concluded that

the existing pond has one burrowing owl, and many ground squirrels. Further the detention pond supports small patches of wetland vegetation, but since it is a constructed feature and not hydrologically connected to an existing water of the U.S., it isn't jurisdictional. There are no other aquatic features (e.g. potential waters of the U.S.) onsite. The farmed fields will be considered Swainson's hawk foraging habitat, and the wetland patches in the detention pond could support a few special-status plants, however this would be addressed by the preconstruction surveys required by mitigation measures B-D, B-E, and B-G. Mitigation measures B-E and B-G require participation in the Solana Habitat Conservation Plan. As shown in Table 3, all other environmental impacts are similar to, or less than, those evaluated in the EIR.

3. Significant effects previously examined will be substantially more severe than shown in the previously certified EIR;

The EIR determined that the buildout of the NQSP would have significant and unavoidable impacts on: agricultural land conversion, air quality, and growth inducement. The proposed project is within the area considered by the NQSP for conversion of agricultural land and the Council made findings of overriding considerations during certification of the EIR for the NQSP. As the project is both within the NQSP and consistent with the anticipated land uses, the project would not result in more severe impacts to agricultural land conversion than evaluated in the EIR. Using current trip generation, shown in Table 4, and air quality modeling, and current health risk assessment (Appendix A), the proposed project would not exceed current thresholds of significance for air quality, greenhouse gas emissions or health risk.

4. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or Association of Environmental Professionals 2018 CEQA Guidelines 192

Of the mitigation measures included in the EIR, all but the following will continue to apply to the proposed project. Mitigation Measures AQ-M, AQ-P, AQ-Q, AQ-V, AQ-W, AQ-X, AQ-Y, T-J, LU-B, LU-C, C-B, C-C, PH-C, and PS-A do not apply to the proposed project because they deal with design or operation of the NQSP from the City perspective. As demonstrated by the technical analysis completed in Appendices A through E, no new mitigation measures are necessary as the EIR adequately mitigated impacts associated with development consistent with the NQSP.

5. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The proposed project results in development anticipated by the NQSP and evaluated in the certified EIR. Technical analysis conducted using 2018 modeling software shows that the impacts associated with the proposed project would not exceed existing thresholds of significance for air quality, greenhouse gas emissions, noise, or health risk. As impacts would not exceed existing thresholds, there is no requirement to impose additional mitigation to reduce impacts. All current building code, water quality requirements, grading, and other construction permit standards will be met by the proposed project as part of the regular development process.

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5. Finding

As indicated in this Addendum, the impacts of the proposed project do not represent a substantial change to the EIR, nor have any substantial changes occurred with respect to the circumstances under which the project is undertaken, that would require major revisions to the certified EIR. Analysis of the proposed project using current trip generation and air quality modeling shows that there are no new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

Impacts beyond those identified in the EIR would not be expected to occur as a result of the proposed project, and the proposed project would remain subject to all applicable previously required mitigation measures from the EIR. The proposed project would not result in any new information of substantial importance that would have new, more severe impacts, new mitigation measures, or new or revised alternatives from what was identified in the EIR.

Based on the record as a whole, there is no substantial evidence that the proposed project would result in significant environmental impacts not previously studied in the EIR and, accordingly, the project changes would not result in any conditions identified in CEQA Guidelines Section 15162. Thus, a subsequent EIR or MND is not required for the changes to the project and the City adopts this addendum to the Northeast Quadrant Specific Plan EIR (SCH# 9211307) in accordance with CEQA Guidelines Section 15164.

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Appendix A Focused Construction Air Quality Analysis

Appendices

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PLACEWORKS

TECHNICAL MEMORANDUM

DATE	January 18, 2019
TO	City of Dixon
ADDRESS	600 A Street, Dixon, CA 95620
CONTACT	Scott Greely, Associate Planner
FROM	John Vang, Senior Associate
SUBJECT	Northeast Quadrant Specific Plan Scannell Properties Warehouse Air Quality and Greenhouse Gas Emissions Technical Memorandum
PROJECT NUMBER	DXN-01

1. Introduction

This Air Quality and Greenhouse Gas (GHG) Emissions Technical Memorandum is prepared for the City of Dixon to evaluate the potential air quality and GHG emissions impacts pursuant to the California Environmental Quality Act (CEQA) from the development and operation of the proposed warehousing project (Proposed Project) within the Northeast Quadrant Specific Plan (NQSP) of the City of Dixon.

PlaceWorks was retained by the City of Dixon to conduct an air quality and greenhouse gas (GHG) emissions impact analysis for the Proposed Project in comparison to impacts identified in the 1995 Certified EIR for the NQSP (Approved Project). This analysis was conducted in accordance with the Yolo-Solano Air Quality Management District (YSAQMD) Handbook for Assessing and Mitigation Air Quality Impacts (Handbook) (YSAQMD 1995).

1.1 PROJECT LOCATION

The Proposed Project is within the NQSP area and consists of approximately 39.7 acres at the northeast corner of Dorset Drive over the following three separate parcels:

» Site A, 25.69-acres, Assessor's Parcel Number (APN) 0111-190-010
» Site B, 5.80-acres, APN 0111-080-011
» Site C, 8.26-acres APN 0111-190-030

The primary development would occur over Sites A and B, which total approximately 31.49 acres. The project site is bounded by vacant land to the north, south, and east and by East Dorset Drive and a Walmart Supercenter to the west. Existing sensitive receptors proximate to the project site include residences approximately 650 feet southeast and 1,700 feet southwest of the project site.

1.2 PROJECT DESCRIPTION

Proposed Project

The Proposed Project would develop a 502,264-square foot Type III-b tilt-up industrial warehouse distribution facility, approximately 50 feet tall to the parapet. The north and south side of the proposed building would each include 63 truck bays for a total of 126 truck bays. Approximately 110 standard parking spaces (180 square feet) and 289 trailer-sized parking spaces (550 square feet) would be provided. It is assumed that the warehouse would operate 24 hours a day and 7 days a week.

APPROVED PROJECT

The NQSP allows for development of approximately 5.8 million square feet of development as shown in Table 1, *Approved Project Buildout Summary*. There is 286,700 square feet developed within the 643-acre Specific Plan, resulting in a remaining development capacity of approximately 5.5 million square feet.

Table 1 Approved Project Buildout Summary

NQSP Land Use Designation	Acres	FAR	Approved Project	Developed	Remaining Development Capacity
Highway Commercial	142.2	0.25	1,548,600	220,000	1,328,600
Community Commercial	51.9	0.25	565,200	4,400	560,800
Professional Office	105.4	0.30	1,377,000	0	1,377,000
Light Industrial	214.4	0.25	2,334,800	62,300	2,272,500
ROW/Open Space	129.1				129.1
TOTAL	**643**		**5,825,600**	286,700	5,538,900

1.3 MODELING METHODOLOGY

This analysis evaluates the impacts of the Proposed Project based on the guidance, methodologies, and significance thresholds recommended in the YSAQMD Handbook. The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. "Emission" refers to the actual quantity of pollutant, measured in pounds per day. "Concentration" refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). Emissions generated by the Proposed Project are compared to that of the remaining development capacity of the Approved Project in order to determine if the Proposed Project would result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects per Section 15162 of the CEQA Guidelines.

Transportation emissions are based on average daily vehicle trips for the Proposed Project and the NQSP, compiled by PlaceWorks. A truck trip length of 60 miles per trip is based on the distance measured from the project site to the Port of Oakland. Emissions of the Proposed Project and the remaining development capacity associated with the Approved Project are modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Criteria air pollutant and GHG emissions modeling for construction and

operational phases of the Proposed Project and operation of the remaining development capacity of the Approved Project is in the appendices of this technical memorandum.

The health risk assessment (HRA) was conducted in accordance with relevant and appropriate procedures of the US Environmental Protection Agency (USEPA), California Environmental Protection Agency (CalEPA), Office of Environmental Health and Hazard Assessment (OEHHA), and YSAQMD. Guidance from these agencies recommends completion of health risk assessments to determine the impacts of hazardous air emissions upon sensitive receptors in the vicinity of the project. This HRA considers the health impact to sensitive receptors (e.g., children at the nearby residences) of operational phase emissions from diesel particulate matter (DPM) from Project-related trucks. Nearby off-site sensitive receptors in close proximity to the project site includes residences to the southeast and southwest. The AERMOD atmospheric dispersion model was performed to concentration of emitted compounds on sensitive receptors near the project. The California Air Resources Board's Hotspots Analysis and Reporting Program (HARP2) Risk Assessment Standalone Tool, Version 18159, was used to calculate the cancer risk values.

2. Summary of Previous Environmental Analysis

2.1 AIR QUALITY

The following summarizes the air quality impacts associated with the NQSP project (Approved Project) as identified in the certified Environmental Impact Report for the Northeast Quadrant Specific Plan (State Clearinghouse No. 92113073) (1995 Certified EIR).

Regional Construction Emissions

The 1995 Certified EIR identified that regional construction emissions would be reduced to less than significant with incorporation of Mitigation Measures (MM) AQ-A through AQ-L. Mitigation Measures AQ-A through AQ-G would contribute in reducing fugitive dust PM_{10} emissions related to construction activities while MMs AQ-H through AQ-K would contribute in reducing VOC and NO_X emissions from operation of construction-related equipment.

Regional Operation Emissions

MOBILE SOURCES

The 1995 Certified EIR analyzed regional operation-phase air quality impacts associated with project-related mobile-source emissions. It identified that implementation of the Approved Project would generate mobile-source emissions that would exceed the regional significance thresholds and result in a significant and unavoidable operation-phase regional air quality impact. No mitigation measures were identified.

STATIONARY SOURCES FROM ENERGY GENERATION

The 1995 Certified EIR identified that regional air quality impacts associated with energy usage from future developments would be less than significant.

AGRICULTURAL BURNING

The 1995 Certified EIR analyzed impacts from generation of PM_{10} emissions associated with agricultural burning. Impacts were identified to be less than significant with implementation of MMs AQ-W and AQ-X.

Localized Emissions

The 1995 Certified EIR determined that even with incorporation of MMs AQ-M through AQ-T, implementation of the Approved Project would result in significant and unavoidable CO impacts. Mitigation Measures AQ-M through AQ-T focuses on increasing public transit use and increasing active transit which would contribute in reducing vehicle trips.

Impacts of the Environment on the Project

The 1995 EIR analyzed potential impacts of the environment onto the Approved Project as follows:

AGRICULTURAL BURNING

Air Quality land use compatibility impacts associated with siting of sensitive land uses near agricultural burning operations were identified to be less than significant with implementation of MM AQ-V. This mitigation measure would provide an agricultural buffer zone on the east side of the project site.

2.2 GREENHOUSE GAS EMISSIONS

The 1995 Certified EIR did not evaluate greenhouse gas (GHG) emissions impacts because, prior to Senate Bill 97 which went into effect January 1, 2010, this was not included in the CEQA Guidelines Appendix G checklist and the City did not have adopted thresholds at the time of preparation.

3. Adopted Mitigation Measures Applicable to the Proposed Project

The following air quality-related mitigation measures were adopted for the 1995 Certified EIR. These mitigation measures apply to the Proposed Project. Modifications to the original mitigation measures to reflect changes in current emission control technologies are identified in ~~strikeout text~~ to indicate deletions and <u>underlined</u> to signify additions. Mitigation Measures AQ-M, AQ-P, AQ-Q and AQ-Y are not applicable to the proposed light industrial land use and were included in the 1995 Certified EIR to address trip reductions within the Highway Commercial planning areas. Mitigation Measures AQ-V, AQ-W, and AQ-X are not applicable since the Project site is not on the eastern boundary of the NQSP and no agricultural burning is proposed onsite.

MM AQ-A The project construction site shall be watered at least two times per day. Emphasis shall be placed on the watering of unpaved roadways during periods of high vehicle movement.

MM AQ-B Tarpaulins or other effective covers shall be used on haul trucks when transferring earth materials.

MM AB-C Where feasible, all inactive portions of the project construction site shall be seeded and watered until vegetation is grown.

MM AQ-D All disturbed soil areas not subject to revegation shall be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by Yolo Solano Air Quality Management District.

MM AQ-E Soils shall not be exposed nor grading occur during periods where wind speeds are greater than 20 miles per hour averaged over one hour.

MM AQ-F Vehicle speed shall not exceed a maximum of 15 miles per hour on all unpaved roads.

MM AQ-G All roadways, driveways, and sidewalks shall be paved as soon as possible. In addition, building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

MM AQ-H Proper maintenance of equipment and engines shall be maintained at all times.

MM AQ-I Vehicle idling shall be kept to an absolute minimum. As a general rule, idling shall be kept below 10 minutes.

MM AQ-J During smog season (April through October), the construction period shall be lengthened so as to minimize the number of vehicles and equipment operating at the same time.

MM AQ-K Construction activities should utilize new technologies to control ozone precursor emissions as they become available and feasible.

MM AQ-L A site assessment shall be conducted before construction activities begin. At locations where petroleum contamination has occurred, the soils shall be remediated using appropriate techniques (Section 4.10, Public Health and Safety). Removal of petroleum contamination will also eliminate the generation of hydrogen sulfide and its associated odor. If unforeseen areas of subsurface contamination are encountered during excavation activities, grading shall be curtailed in the contaminated area until the area is evaluated and remediated as appropriate.

~~MM AQ-M Convenient access, such as shuttle services, to public transit systems shall be provided to encourage shoppers, employees, and visitors to use mass transit, thereby reducing vehicle emissions.~~

MM AQ-N Information shall be provided at various locations within the project site about carpool, vanpool, or transit use facilities. Incentives, such as parking stalls for carpool and vanpool vehicles shall also be exercised.

MM AQ-O Employee trip reduction and other applicable transportation control measures shall be developed. An annual report shall be prepared to document and demonstrate employee trip reduction.

~~MM AQ-P Mixed land uses shall reduce vehicle trips and vehicle miles traveled. Supportive land uses shall be sited within walking/biking distances of one another.~~

~~MM AQ-Q Support facilities to encourage modes of transportation other than the automobile shall include pedestrian and bicycle pathways.~~

MM AQ-R Parking lots, drive-through facilities, and egress/ingress areas shall be designed to reduce vehicle idling. Slow-moving or idling vehicles produce more emissions.

MM AQ-S Secure, convenient indoor or outdoor bike storage racks shall be provided at commercial centers, office buildings, and other places of employment.

MM AQ-T Street design standards, including landscape areas between the sidewalk and street, night lighting, safe islands in the center of major arterials, automatic street or pedestrian activated "walk" signals, and adequate "walk" times, shall be enforced.

MM AQ-U PM_{10} emissions shall be reduced by curtailing fugitive dust through effective landscaping, and paving all vehicle roads and parking lots.

~~MM AQ-V An agricultural buffer is proposed on the east side of the project site.~~

~~MM AQ-W Air pollution control districts regulate the timing and methods of field burning in order to reduce the impact on local and regional air quality.~~

~~MM AQ-X An agricultural buffer is proposed on the east side of the project site.~~

~~MM AQ-Y~~

- ~~Establish a priority system favoring multi-rider vehicles.~~
- ~~Establish parking pricing strategies.~~
- ~~Maximize telecommunication, including appropriate network infrastructure.~~
- ~~Establish satellite offices when appropriate. (Applicable to office/industrial and educational institutions)~~
- ~~Offer low-cost financing to employees for the purchase of telecommuting equipment or lend company-owned equipment.~~
- ~~Provide home computer link to mainframe computer (via modem) so that employees may complete programming tasks or use computers at home.~~
- ~~Employer-sponsored subscription buses to supplement or substitute for public transit service.~~
- ~~Provision of shuttle bus service from an employment center to main transit lines, or during lunch hours to provide employers with access to shopping and restaurants.~~
- ~~Request minibus, jitney, or other para-transit service with the project.~~
- ~~Request improvement and possible relocation of an existing transit stop or station to serve both new and existing surrounding development.~~
- ~~Request dedication of bus turnouts or other street designs to accommodate bus travel under the subdivision ordinance.~~
- ~~Request amenities to increase the convenience and attractiveness of transit stops; i.e., waiting shelters, benches, secure bike parking, public telephone, and posted bus schedules.~~
- ~~Request convenient bus schedules to accommodate unusual schedules.~~
- ~~Request free or reduced transit fares for midday central business district trips.~~
- ~~Provide free bus transfers, free or low-cost bus fares, and bus transit passes.~~

- ~~Request construction of a transit center that will serve the future project and the community.~~
- ~~Request development of a park-and-ride lot.~~

4. Impacts Associated with the Proposed Project

4.1 AIR QUALITY

Environmental Setting

The regulatory settings for the Proposed Project has changed since certification of the 1995 FEIR. The following discussion is provided to update conditions relative to development of the Proposed Project.

Geographic areas are classified under the federal and California Clean Air Act as either in attainment or nonattainment for each criteria pollutant based on whether the ambient air quality standards (AAQS) have been achieved. Both the State of California and the federal government have established health-based AAQS for seven air pollutants: ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). Table 2, *Ambient Air Quality Standards for Criteria Pollutants*, shows the most recent AAQS adopted.

Table 2 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[3]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	

Table 2 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[5]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	*	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	*	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	*	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016.

Notes: ppm: parts per million; µg/m^3: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

[1] California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

[3] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[4] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

Table 2 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources

[5] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

The Sacrament Valley Air Basin (SVAB) is designated nonattainment for ozone (O_3) under the California 1-hour and 8-hour AAQS and the 8-hour National AAQS (SMAQMD 2019). Additionally, SVAB is also in nonattainment for PM_{10} under the California AAQS and for $PM_{2.5}$ under the 24-hour National AAQS. The YSAQMD along with the other air district in the SVAB coordinate in developing AQMPs for the region, which include the following:

» 2017 Sacramento Regional 2008 8-Hour Ozone Attainment and Further Reasonable Progress Plan

» $PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area

» 2016 Triennial Assessment and Plan Update

Impact Analysis

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 Proposed Project:

Environmental Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circum-stances Requiring Major EIR Revisions	New Information Showing New or Increased Significant Effects	Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?				X	
c) Expose sensitive receptors to substantial pollutant concentrations?				X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.				X	

Comments:

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

No Changes or New Information Requiring Preparation of an EIR. A consistency determination an air quality management plan (AQMP) plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in an AQMP. The YSAQMD along with the other air district in the Sacramento Air Valley Basin (SVAB) coordinate in developing AQMPs for the region.

The regional emissions inventory for the SVAB is compiled by YSAQMD and Association of Bay Area Governments (ABAG). Regional population, housing, and employment projections developed by ABAG are based, in part, on cities' general plan land use designations. These projections form the foundation for the emissions inventory of an AQMP. These demographic trends are incorporated into the regional transportation plan/sustainable communities strategy (RTP/SCS), compiled by ABAG and the Metropolitan Transportation Commission (MTC) to determine priority transportation projects and vehicle miles traveled in the ABAG region. The AQMP strategy is based on projections from local general plans. Projects that are consistent with the local general plan are considered consistent with the air quality-related regional plan.

Changes in population, housing, or employment growth projections have the potential to affect ABAG's demographic projections; and therefore, the assumptions in AQMPs prepared for the region. The 1995 Certified EIR identified that the NQSP area would generate a 11,000 employees. Updates to ABAG's demographic forecasts and AQMPs prepared for the SVAB after the Approved Project account for this growth. It is anticipated that the Proposed Project would generate approximate 60 employees. Thus, the employment growth anticipated for the Proposed Project would be within the growth identified for the Approved Project. Furthermore, because the Proposed Project is a permitted use under the current zoning designation, it is assumed that growth associated with the Proposed Project would be the same as what was analyzed in the 1995 Certified EIR. In addition, as discussed in 4.1(b), emissions generated by the Proposed Project would be similar to the type of development as analyzed for the Approved Project. Therefore, implementation of the Proposed Project would not substantially increase or introduce new significant impacts compared to what was identified in the 1995 Certified EIR.

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

No Changes or New Information Requiring Preparation of an EIR. The following describes project-related impacts from short-term construction activities and long-term operation of the Proposed Project.

Regional Construction Impacts

Construction activities would result in the generation of air pollutants. These emissions would primarily be 1) exhaust emissions from off-road diesel-powered construction equipment; 2) dust generated from demolition, site preparation, earthmoving, and other construction activities; 3) exhaust emissions from on-road vehicles and 4) off-gas emissions of volatile organic compounds (VOCs) from application of asphalt, paints, and coatings.

The Proposed Project construction-related emissions are shown in Table 3, *Regional Construction Emissions*. For purposes of this analysis, emissions shown in the table incorporate the previously prescribed MM AQ-A and AQ-F, which requires watering disturbed areas at least two times per day and restricting the speed limit to 15 miles per hour unpaved surfaces onsite. In addition, it is assumed that the type of project and the

construction processes associated with the Proposed Project would be similar to what would have been needed for a development on the project site as analyzed for the Approved Project in the 1995 Certified EIR. Thus, emissions associated with the Proposed Project are representative of emissions for a project as analyzed for the Approved Project.

As shown in the table, Project-related construction emissions would not exceed the YSAQMD regional significance thresholds. Furthermore, and as stated, construction emissions associated with the Proposed Project would be representative of project-specific emissions to what was analyzed for the Approved Project. Therefore, development of the Proposed Project would not result in a substantial increase in construction emissions compared to that identified in the 1995 Certified EIR that would exceed YSAQMD's significance thresholds. In addition, the implementation of the other construction-related mitigation measures (i.e., MMs AQ-B to AQ-E and AQ-G to AQ-L) prescribed in the 1995 Certified EIR would further reduce the emissions shown in Table 3. Overall, there are no changes or new significant information which would require preparation of an EIR.

Table 3 Regional Construction Emissions

	Criteria Air Pollutants (tons/year)[1,2]					
Year	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2019 – Annual Emissions	1	7	4	<1	1	<1
YSAQMD Regional Threshold	10	10	n/a	n/a	n/a	n/a
Exceeds Regional Threshold?	No	No	n/a	n/a	n/a	n/a
	Criteria Air Pollutants (pounds/day)[1,2]					
Year	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2019 – Max Daily Emissions	10	124	67	<1	31	8
YSAQMD Regional Threshold	n/a	n/a	n/a	n/a	80	n/a
Exceeds Regional Threshold?	n/a	n/a	n/a	n/a	No	n/a

Source: CalEEMod, version 2016.3.2.25.
Notes: Totals may not equal 100 percent due to rounding.
[1] Based on information provided and CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment and phasing for comparable projects.
[2] Includes implementation of fugitive dust control measures prescribed under MMs AQ-A and AQ-F, which requires watering disturbed areas a minimum of two times per day and reducing the speed limit to 15 miles per hour on unpaved surfaces, respectively.

Long-Term Operation-Related Air Quality Impact

Long-term air pollutant emissions generated by the Proposed Project would be generated by area sources (e.g., landscape fuel use, aerosols, and architectural coatings), mobile sources from project-related vehicle trips, and energy use (natural gas) associated with the proposed warehouse building. For purposes of this analysis, it is assumed that the Proposed Project would be similar to and consistent with the type of development as analyzed under the 1995 Certified EIR. Thus, emissions associated with the Proposed Project would be representative of emissions for a development project as analyzed for the Approved Project.

Table 4, *Regional Operation Phase Emissions*, identifies criteria air pollutant emissions from the Proposed Project. As shown in the table, the Proposed Project would not exceed the YSAQMD's regional significance thresholds. In addition, because the Proposed Project is consistent with the type of project considered for the project site as analyzed in the 1995 Certified EIR, its implementation would not result in a substantial increase in operation-phase emissions. Furthermore, Project-related emissions would also not exceed the emissions associated with the remaining Approved Project. Overall, there are no changes or new significant information which would require preparation of an EIR.

Table 4 Regional Operation Phase Emissions

Scenario	Criteria Air Pollutants (tons/year)[1,2] VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Annual Emissions						
1995 Certified EIR Approved Project[3]	130	230	1,295	25	218	n/a
Remaining Approved Project	52	142	289	1	69	19
Proposed Project[4]	4	44	204	<1	3	1
YSAQMD Regional Threshold	10	10	n/a	n/a	n/a	n/a
Exceeds Regional Threshold?	No	No	n/a	n/a	n/a	n/a
Daily Emissions						
Scenario	Criteria Air Pollutants (lbs/day)[1,2] VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
1995 Certified EIR Approved Project	710	1,258	7,098	135	1,194	n/a
Remaining Approved Project	340	1,005	2,010	7	514	143
Proposed Project	20	244	1,121	1	18	7
YSAQMD Regional Threshold	n/a	n/a	n/a	n/a	80	n/a
Exceeds Regional Threshold?	n/a	n/a	n/a	n/a	No	n/a

Source: CalEEMod, version 2016.3.2.25.
Notes: Totals may not equal 100 percent due to rounding.
[1] Based on information provided and CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment and phasing for comparable projects.
[2] Includes implementation of fugitive dust control measures prescribed under MMs AQ-A and AQ-F, which requires watering disturbed areas a minimum of two times per day and reducing the speed limit to 15 miles per hour on unpaved surfaces, respectively.
[3] Based on the daily emissions reported in the 1995 Certified EIR multiplied by 365 days and converted to tons per year.
[4] Conservatively assumes operation of up to 45 compressed natural gas-powered (CNG) forklifts that would operate a total of 900 hours per day (45 forklifts x 2 shifts x 10 hrs/shift). It is anticipated that some of the forklifts would be electric-powered and would not all be CNG-powered.

c) Expose sensitive receptors to substantial pollutant concentrations?

No Changes or New Information Requiring Preparation of an EIR. The following describes changes in localized impacts from short-term construction activities and long-term operation of the Proposed Project.

Construction

Health Risk

Emissions from construction equipment primarily consist of diesel particulate matter (DPM). The Office of Environmental Health Hazards Assessment (OEHHA) has recently adopted new guidance for the preparation of health risk assessments issued in March 2015 (OEHHA 2015). OEHHA has developed a cancer risk factor and non-cancer chronic reference exposure level for DPM, but these factors are based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM. For purposes of this analysis, it is anticipated that total duration of actual construction activities over a 10-month time span (February through November 2019), which would limit the exposure to onsite and offsite receptors. For the reasons stated above, it is anticipated that construction emissions would not pose a threat to onsite and offsite receptors from Project-related construction activities. Furthermore, implementation of MM AQ-H and AQ-I would contribute in minimizing construction-related health risk impacts by contributing in minimizing emissions of exhaust DPM. In addition, as stated in the regional construction impact analysis, it is assumed that the construction activities and processes associated with the Proposed Project would be similar to what would have been needed to develop the project site as considered in the 1995 Certified EIR.

Thus, construction of the Proposed Project would not increase the severity or introduce new significant construction-related health risk impacts compared to what was analyzed in the 1995 Certified EIR.

Operation

Health Risk

A Health Risk Assessment (HRA) was prepared to determine if toxic air emissions associated with operational activities at the facility (i.e., diesel truck emissions) could pose a risk to nearby sensitive receptors, such as residents, schools, and hospitals. The nearest sensitive receptors include the residences approximately 900 feet and 1,700 feet southeast and west, respectively, of the project site. The HRA evaluated both carcinogenic and non-carcinogenic health risks, as discussed below. These calculated risk levels were calculated based on the latest methodology released by the OEHHA and YSAQMD recommendations

Carcinogenic Health Risks

Health risks associated with exposure to carcinogenic compounds at the Proposed Project site can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. California has established that a project would result in a significant impact with regard to increasing exposure to carcinogens regulated under Proposition 65 if the project increases cancer risk by one in 100,000 (1.0×10^{-5}) or more. The YSAQMD has established a maximum incremental cancer risk of 10 in a million (10×10^{-6}) for CEQA projects.

Based on the air dispersion modeling results, the maximum exposed individual (MEI) was determined to be the residents near 755 Vaugh Road approximately 900 feet southeast of the project site . If operational emissions from the proposed warehouse/office facility do not pose a risk to the MEI, then there also would be no risk to sensitive receptors that are located at greater distances. Results of the health risk assessment (see Appendix C) indicate that the incremental cancer risk for the MEI, based on the maximum ground floor concentration for a 30-year, 24-hour outdoor exposure duration is 2.1 in a million (2.1×10^{-6}) and would be below the YSAQMD significance threshold of 10 in a million (10×10^{-6}). As stated, because the Proposed Project would be similar to the type of land use considered for the Approved Project at the time the 1995 Certified EIR was prepared, its implementation would not result in increasing the severity or introduce new significant operation-related carcinogenic health risk impacts.

Noncarcinogenic Health Risks

To quantify noncarcinogenic impacts, the hazard index approach was used. The hazard index assumes that chronic sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity value. For compounds affecting the same toxicological endpoint, this ratio is summed. Pursuant to the YSAQMD Handbook, where the total equals or exceeds a value of 1.0, a health hazard is presumed to exist. The health risk assessment performed for the Proposed Project indicates that the hazard index identified for each toxicological endpoint totaled less than 1.0 for the MEI. As discussed for carcinogenic health risk impacts, because the Proposed Project would be similar to the type of land use considered for the Approved Project at the time the 1995 Certified EIR was prepared, its implementation would not result in increasing the severity or introduce new significant operation-related noncarcinogenic health risk impacts.

Carbon Monoxide Hotspot

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9.0 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily

disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

The SVAB has been designated attainment under both the national and California AAQS for CO. As stated, it is anticipated that the Proposed Project would be a development consistent with the type of land use considered for the project site as analyzed in the 1995 Certified EIR. Thus, it is anticipated that implementation of the Proposed Project would result in similar CO hotspot impacts. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact (BAAQMD 2017). The Proposed Project would result in approximately up to 50 peak hour trips (weekdays), which is substantially less than the volumes cited above. Thus, the Proposed Project would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project site. In addition, the 1995 Certified EIR identified that implementation of the Approved Project would result in significant CO hotspot impacts even with incorporation of MMs AQ-M through AQ-T. Therefore, the Proposed Project would not result in increasing the severity or introduce new significant CO hotspot impacts.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

No Changes or New Information Requiring Preparation of an EIR. Per the YSAQMD Handbook, a project may reasonably be expected to have a significant adverse odor impact as follows:

> A project generates odorous emissions in such quantifies as such to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comport, repose, health, or safety of such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, chemical manufacturing, sanitary landfill, fiberglass manufacturing, transfer station, painting/coating operations (e.g., autobody shops), composting facility, food processing facility, petroleum refinery, feed lot/dairy, asphalt batch plant, and rendering plant.

The Proposed Project would develop a warehouse building, which would not fall within the aforementioned types of uses that are associated with foul odors that constitute a public nuisance. Furthermore, the type of land use proposed by the Proposed Project would be consistent with the type of land use considered for the project site as analyzed in the 1995 Certified EIR. In addition, it is not anticipated that the Proposed Project would introduce or require any new construction processes compared to the Approved Project. During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. However, construction-related odor emissions would be temporary, intermittent, and would not affect a significant number of people. Therefore, the Proposed Project would not result in any new impacts, or increase the severity of impacts, with respect to creation of objectionable odors compared to the Approved Project.

4.2 GREENHOUSE GAS

Environmental Setting

The 1995 Certified EIR did not analyzed greenhouse gas (GHG) emissions because it was certified prior to the adoption of Assembly Bill 32 (AB 32), Senate Bill 32 (SB 32), and the Senate Bill 97 (SB 97) amendments

(adopted December 30, 2009, effective March 18, 2010) to the CEQA Guidelines, and GHG emissions had not yet been generally recognized as environmental issue.

The information provided in this section includes the most current scientific data on GHG and global climate change, but does not change the conclusions of the 1995 Certified EIR. Current information on GHG emissions and global climate change do not trigger the need for preparation of a subsequent or supplemental EIR pursuant to Public Resources Section 21166 and CEQA Guidelines Section 15162. The current scientific information does not demonstrate that the Proposed Project will result in new or more severe significant impacts than those determined in the 1995 FEIR.[1]

STATE LAWS

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Orders S-03-05 and B-30-15; Assembly Bill (AB) 32; Senate Bill (SB) 32; and SB 375.

Executive Order S-03-05

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

» 2000 levels by 2010
» 1990 levels by 2020
» 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

State of California guidance and targets for reductions in GHG emissions are generally embodied in the Global Warming Solutions Act, adopted with passage of AB 32. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 emissions reduction goal established in Executive Order S-03-05.

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the state to 40 percent below 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

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[1] For example, the trial court decision in *American Canyon Community United for Responsible Growth v. City of American Canyon*, Case No. 26-27462. The Superior Court held that the Global Warming Solutions Act of 2006 (AB 32) is not the type of new information contemplated by Section 21166 because "new legislation requiring creation of state regulations certainly does not pertain to this particular Project or its effects." See also for example, the Superior Court opinions in *Natural Resources Defense Council v. Reclamation Board*, Case No. 06-CS-01228, where the court held that technical reports concerning global warming were not new information requiring preparation of a subsequent or supplemental EIR. Also, the *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, Case No. 37-2009-00085307-CU-MC-CTL, where the court held that effect of GHG emissions on climate was known long before the City approved an EIR in 1994, quoted the United States Supreme Court: "In the late 1970s, the Federal Government began devoting serious attention to the possibility that carbon dioxide emissions associated with human activity could provoke climate change." In this case, the court concluded that the petitioners provided no competent evidence of new information of a severe impact; and therefore, the City's reliance on an addendum was appropriate.

Senate Bill 32

In September 2016, Governor Brown signed Senate Bill 32, making the Executive Order goal for year 2030 into a statewide, mandated legislative target.

2017 Climate Change Scoping Plan

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB approved the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017).

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Metropolitan Transportation Commission (MTC) is the MPO for the Bay Area region, which includes Solano County.

Impact Analysis

Would the Proposed Project:

Environmental Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circum-stances Requiring Major EIR Revisions	New Information Showing New or Increased Significant Effects	Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				X	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X	

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

No Changes or New Information Requiring Preparation of an EIR. Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last

200 years. A typical project, even a very large one, does not generate enough greenhouse gas emissions on its own to influence global climate change significantly; hence, the issue of global climate change is by definition a cumulative environmental impact.

Implementation of the Proposed Project would develop a warehouse building of approximately 502,264 square feet that would provide 492,264 square feet of warehousing space and 10,000 square feet of office space. The type of land use proposed under the Proposed Project would be consistent with the type of land use analyzed and considered in the 1995 Certified EIR. Thus, it is assumed that the emissions associated with the Proposed Project would be representative of emissions for development projects considered for the project site as assumed in the 1995 Certified EIR.

The YSAQMD does not currently have adopted or interim GHG emissions significance thresholds. For purposes of this analysis, the current GHG thresholds of significance developed by the Sacramento Metro Air Quality Management District (SMAQMD) are utilized. Per the current SMAQMD CEQA Guide, development projects are considered to result in significant GHG emissions impacts if they generate emissions that exceed the following (SMAQMD 2016):

» Construction Phase: 1,100 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year.

» Operation Phase: 1,100 $MTCO_2e$ per year.

Construction

Project-related construction GHG emissions are shown in Table 5, *Proposed Project Construction GHG Emissions*. As shown in the table, construction of the Proposed Project would generate 1,080 MTCO2e in year 2019 and would not exceed the 1,100 $MTCO_2e$/yr significance threshold. In addition, it is not anticipated that development of the Proposed Project would introduce or require any new construction processes compared to developments considered for the Approved Project. Therefore, development of the Proposed Project would not result in any new impacts, or increase the severity of impacts, with respect to construction-related GHG emissions compared to the Approved Project.

Table 5 Proposed Project Construction GHG Emissions

Summary	Proposed Project $MTCO_2e$ per Year
2019 Proposed Project	1,080
Significance Threshold	1,100 $MTCO_2e$/Yr
Exceeds Threshold?	No

Sources: CalEEMod Version 2016.3.2.
Note: Totals may not total to 100 percent due to rounding. NA: not applicable.

Operational Phase

Project-related operational GHG emissions are shown in Table 6, *Operational Phase GHG Emissions*. Like the Approved Project, operation-phase emissions associated with the Proposed Project would exceed the 1,100 $MTCO_2e$/yr significance threshold. However, current information on GHG emissions and global climate change do not trigger the need for preparation of a subsequent or supplemental EIR pursuant to Public Resources Section 21166 and CEQA Guidelines Section 15162. The Proposed Project is consistent with the type of project considered for the project site as analyzedin the in the 1995 Certified EIR. The Proposed Project would not generate an increase in GHG emissions compared to that identified for the Approved Project. Project-related emissions shown in Table 6 would be representative of the type of development considered for the project site as analyzed in the 1995 Certified EIR. Therefore, development of the Proposed

Project would not result in any new impacts, or increase the severity of impacts, with respect to operational phase GHG emissions compared to the Approved Project.

Table 6 Operational Phase GHG Emissions

Summary	Remaining Approved Project $MTCO_2e$ per Year	Proposed Project $MTCO_2e$ per Year	Comparison $MTCO_2e$ per Year
Area	<1	<1	<1
Energy[1]	23,220	1,551	-21,669
Mobile	92,497	8,594	-83,903
Waste	3,064	237	-2,827
Water	1,971	206	-1,766
Off-Road Equipment[2]	n/a	3,649	3,649
Total Emissions	120,752	14,235	-106,517
Significance Threshold	1,100 $MTCO_2e$/Yr	1,100 $MTCO_2e$/Yr	1,100 $MTCO_2e$/Yr
Exceeds Threshold?	**Yes**	**Yes**	**No**

Sources: CalEEMod Version 2016.3.2.
Note: Totals may not total to 100 percent due to rounding. NA: not applicable.
[1] Based on the 2016 Building Energy Efficiency Standards.
[2] Conservatively assumes operation of up to 45 compressed natural gas-powered (CNG) forklifts that would operate a total of 900 hours per day (45 forklifts x 2 shifts x 10 hrs/shift). It is anticipated that some of the forklifts would be electric-powered and would not all be CNG-powered.

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

No Changes or New Information Requiring Preparation of an EIR. Applicable plans adopted for the purpose of reducing GHG emissions include the CARB Scoping Plan and the Metropolitan Transportation Commission/Association of Bay Area Governments (MTC/ABAG) *Plan Bay Area 2040*. A consistency analysis of the Proposed Project with these plans is presented below.

CARB's Scoping Plan

In accordance with AB 32 and SB 32, CARB *Scoping Plan Update* (Scoping Plan) to outline the State's strategy to achieve 1990 level emissions by year 2020 and a 40 percent reduction from 1990 emissions by year 2030. The CARB Scoping Plan is applicable to state agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Statewide strategies to reduce GHG emissions in the latest *2017 Climate Change Scoping Plan* include implementing Senate Bill 350, which expands the Renewables Portfolio Standard to 50 percent by 2030 and doubles energy efficiency savings; expanding the Low Carbon Fuel Standard to 18 percent by 2030; implementing the *Mobile Source Strategy* to deploy zero-electric vehicle buses and trucks; implementation of the *Sustainable Freight Action Plan*; implementation of the *Short-Lived Climate Pollutant Reduction Strategy*, which reduces methane and hydrofluorocarbons 40 percent below 2013 levels by 2030 and black carbon emissions 50 percent below 2013 levels by 2030; continuing to implement Senate Bill 375; creation of a post-2020 Cap-and-Trade Program; and development of an *Integrated Natural and Working Lands Action Plan* to secure California's land base as a net carbon sink. Statewide GHG emissions reduction measures that are being implemented as a result of the Scoping Plan would reduce the Proposed Project's GHG emissions.

The Proposed Project and future individual projects accommodated under the Approved Project would be constructed to achieve the standards in effect at the time of development and would not conflict with statewide programs adopted for the purpose of reducing GHG emissions. While measures in the Scoping Plan apply to state agencies and not the Proposed Project, the Project's GHG emissions would be reduced from compliance with statewide measures that have been adopted since AB 32 and SB 32 were adopted. Therefore, implementation of the Proposed Project would not result in changes or new information requiring preparation of an EIR.

MTC's/ABAG's Plan Bay Area

Plan Bay Area 2040 is the Bay Area's Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). To achieve MTC/ABAG's sustainable vision for the Bay Area, the Plan Bay Area land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, vehicle miles traveled, and associated GHG emissions reductions. The NQSP planning area and Proposed Project are not within a PDA. However, because the Plan Bay Area 2040 accounts for local planning efforts of its member municipalities, it accounts for the growth associated with the Approved Project. As stated, the 1995 Certified EIR identified that the Approved Project would result in 11,000 employees. Because the Proposed Project would be consistent with the land use designation for the project site, it would be consistent with the type of land use considered under the Approved Project. Thus, its implementation would not result in exceeding the projected growth forecast and would not conflict with the concept plan of the Plan Bay Area 2040. Therefore, the Proposed Project would not result in changes or new information requiring preparation of an EIR.

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Appendix A – Emissions Summary and Modeling Inputs

Regional Construction Emissions Worksheet: Annual

*CalEEMod, Version 2016.3.2

Annual Contruction Emissions

	Annual Emissions (tons/year)					
Year	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
2019	0.6616	6.8351	4.2353	0.0117	1.3444	0.4262
YSAQMD Regional Significance Thresholds	**10**	**10**	**N/A**	**N/A**	**N/A**	**N/A**
Exceeds Threshold?	No	No	N/A	N/A	N/A	N/A

Rough Grading

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019**						
Fugitive Dust						0.1745	0.0706
Off-Road		0.198	2.313	1.1928	2.45E-03	0.0975	0.0897
Total		**0.198**	**2.313**	**1.1928**	**2.45E-03**	**0.272**	**0.1603**
Offsite							
Hauling		9.39E-03	0.4059	0.0532	5.10E-04	0.0214	2.55E-03
Vendor		0	0	0	0	0	0
Worker		3.94E-03	2.99E-03	0.0285	9.00E-05	0.5395	0.0552
Total		**0.0133**	**0.4089**	**0.0816**	**6.00E-04**	**0.5609**	**0.0577**
TOTAL		***0.2113***	***2.7219***	***1.2744***	***0.0031***	***0.8329***	***0.2180***

Rough Grading Haul (Retention Pond to Project Site)

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019**						
Fugitive Dust						0.0155	2.34E-03
Off-Road		0	0	0	0	0	0
Total		**0**	**0**	**0**	**0**	**0.0155**	**2.34E-03**
Offsite							
Hauling		0.0224	0.9596	0.1264	1.25E-03	0.1112	0.0123
Vendor		0	0	0	0	0	0
Worker		0	0	0	0	0	0
Total		**0.0224**	**0.9596**	**0.1264**	**1.25E-03**	**0.1112**	**0.0123**
TOTAL		***0.0224***	***0.9596***	***0.1264***	***0.0013***	***0.1267***	***0.0146***

Building Construction

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019**						
Off-Road		0.1417	1.2647	1.0298	1.61E-03	0.0774	0.0728
Total		**0.1417**	**1.2647**	**1.0298**	**1.61E-03**	**0.0774**	**0.0728**
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.0416	0.9449	0.2673	2.29E-03	0.0599	0.0225
Worker		0.0874	0.0663	0.6315	1.95E-03	0.1807	0.0491
Total		**0.1289**	**1.0113**	**0.8988**	**4.24E-03**	**0.2406**	**0.0716**
TOTAL		***0.2706***	***2.2760***	***1.9286***	***0.0059***	***0.3180***	***0.1444***

Asphalt Paving

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019**						
Off-Road		0.08	0.8384	0.8066	1.25E-03	0.0454	0.0417
Paving		0.0261				0	0
Total		**0.1061**	**0.8384**	**0.8066**	**1.25E-03**	**0.0454**	**0.0417**
Offsite							
Hauling		0	0	0	0	0	0

	Vendor	0	0	0	0	0	0
	Worker	4.20E-03	3.19E-03	0.0304	9.00E-05	8.69E-03	2.36E-03
	Total	**4.20E-03**	**3.19E-03**	**0.0304**	**9.00E-05**	**8.69E-03**	**2.36E-03**
TOTAL		***0.1103***	***0.8416***	***0.8370***	***0.0013***	***0.0541***	***0.0441***

Architectural Coating

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2019**						
	Archit. Coating		0.0373				0	0
	Off-Road		4.66E-03	0.0321	0.0322	5.00E-05	2.25E-03	2.25E-03
	Total		**0.0419**	**0.0321**	**0.0322**	**5.00E-05**	**2.25E-03**	**2.25E-03**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0	0	0	0	0	0
	Worker		5.08E-03	3.86E-03	0.0367	1.10E-04	0.0105	2.85E-03
	Total		**5.08E-03**	**3.86E-03**	**0.0367**	**1.10E-04**	**0.0105**	**2.85E-03**
TOTAL			***0.0470***	***0.0360***	***0.0689***	***0.0002***	***0.0128***	***0.0051***

Regional Construction Emissions Worksheet: Daily

*CalEEMod, Version 2016.3.2

Rough Grading

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019** Summer						
	Fugitive Dust					4.057	1.6417
	Off-Road	4.6037	53.7898	27.7383	0.057	2.2684	2.0869
	Total	**4.6037**	**53.7898**	**27.7383**	**0.057**	**6.3253**	**3.7286**
Offsite							
	Hauling	0.2067	9.5983	1.0036	0.0126	0.5844	0.0671
	Vendor	0	0	0	0	0	0
	Worker	0.0967	0.0618	0.7431	2.22E-03	14.7927	1.5077
	Total	**0.3034**	**9.6601**	**1.7467**	**0.0149**	**15.3771**	**1.5748**
TOTAL		***4.9071***	***63.4499***	***29.4850***	***0.0719***	***21.7024***	***5.3034***
Onsite	**2019 Winter**						
	Fugitive Dust					4.057	1.6417
	Off-Road	4.6037	53.7898	27.7383	0.057	2.2684	2.0869
	Total	**4.6037**	**53.7898**	**27.7383**	**0.057**	**6.3253**	**3.7286**
Offsite							
	Hauling	0.2349	9.2122	1.5593	0.0111	0.5867	0.0694
	Vendor	0	0	0	0	0	0
	Worker	0.1017	0.0782	0.6796	2.01E-03	14.7927	1.5077
	Total	**0.3366**	**9.2904**	**2.2389**	**0.0131**	**15.3794**	**1.5771**
TOTAL		***4.9403***	***63.0802***	***29.9772***	***0.0701***	***21.7047***	***5.3057***

Onsite	**2019**						
	Fugitive Dust	0	0	0	0	4.057	1.6417
	Off-Road	4.6037	53.7898	27.7383	0.057	2.2684	2.0869
	Total	**4.6037**	**53.7898**	**27.7383**	**0.057**	**6.3253**	**3.7286**
Offsite							
	Hauling	0.2349	9.5983	1.5593	0.0126	0.5867	0.0694
	Vendor	0	0	0	0	0	0
	Worker	0.1017	0.0782	0.7431	0.00222	14.7927	1.5077
	Total	**0.3366**	**9.6601**	**2.2389**	**0.0149**	**15.3794**	**1.5771**
TOTAL		***4.9403***	***63.4499***	***29.9772***	***0.0719***	***21.7047***	***5.3057***

Rough Grading Haul (Retention Pond to Project Site)

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019** Summer						
	Fugitive Dust					0.3592	0.0544
	Off-Road	0	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0.3592**	**0.0544**
Offsite							
	Hauling	0.4923	22.6715	2.3973	0.0305	3.0408	0.3296
	Vendor	0	0	0	0	0	0
	Worker	0	0	0	0	0	0
	Total	**0.4923**	**22.6715**	**2.3973**	**0.0305**	**3.0408**	**0.3296**
TOTAL		***0.4923***	***22.6715***	***2.3973***	***0.0305***	***3.4000***	***0.3840***
Onsite	**2019 Winter**						
	Fugitive Dust					0.3592	0.0544
	Off-Road	0	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0.3592**	**0.0544**
Offsite							

	Hauling	0.5579	21.79	3.693	0.0269	3.0463	0.3349
	Vendor	0	0	0	0	0	0
	Worker	0	0	0	0	0	0
	Total	**0.5579**	**21.79**	**3.693**	**0.0269**	**3.0463**	**0.3349**
TOTAL		***0.5579***	***21.7900***	***3.6930***	***0.0269***	***3.4055***	***0.3893***
Onsite	**2019**						
	Fugitive Dust	0	0	0	0	0.3592	0.0544
	Off-Road	0	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**0.3592**	**0.0544**
Offsite							
	Hauling	0.5579	22.6715	3.693	0.0305	3.0463	0.3349
	Vendor	0	0	0	0	0	0
	Worker	0	0	0	0	0	0
	Total	**0.5579**	**22.6715**	**3.693**	**0.0305**	**3.0463**	**0.3349**
TOTAL		***0.5579***	***22.6715***	***3.6930***	***0.0305***	***3.4055***	***0.3893***
	Rough Grading+Haul	***5.50***	***86.12***	***33.67***	***0.10***	***25.11***	***5.70***

Building Construction

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019** Summer						
	Off-Road	2.3612	21.0788	17.1638	0.0269	1.2899	1.2127
	Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**	**1.2899**	**1.2127**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.6821	15.4336	4.2066	0.0385	1.022	0.3807
	Worker	1.5367	0.9825	11.8063	0.0352	3.1136	0.8434
	Total	**2.2187**	**16.416**	**16.0129**	**0.0737**	**4.1356**	**1.2241**
TOTAL		***4.5799***	***37.4948***	***33.1767***	***0.1006***	***5.4255***	***2.4368***
Onsite	**2019** Winter						
	Off-Road	2.3612	21.0788	17.1638	0.0269	1.2899	1.2127
	Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**	**1.2899**	**1.2127**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.715	15.7755	4.8038	0.0375	1.0238	0.3824
	Worker	1.6165	1.2427	10.7984	0.032	3.1136	0.8434
	Total	**2.3315**	**17.0183**	**15.6022**	**0.0695**	**4.1374**	**1.2258**
TOTAL		***4.6927***	***38.0971***	***32.7660***	***0.0964***	***5.4273***	***2.4385***
Onsite	**2019**						
	Off-Road	2.3612	21.0788	17.1638	0.0269	1.2899	1.2127
	Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**	**1.2899**	**1.2127**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.715	15.7755	4.8038	0.0385	1.0238	0.3824
	Worker	1.6165	1.2427	11.8063	0.0352	3.1136	0.8434
	Total	**2.3315**	**17.0183**	**16.0129**	**0.0737**	**4.1374**	**1.2258**
TOTAL		***4.6927***	***38.0971***	***33.1767***	***0.1006***	***5.4273***	***2.4385***
	Rough Grading+Haul & Building Construction	***10.19***	***124.22***	***66.85***	***0.20***	***30.54***	***8.13***

Asphalt Paving

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019** Summer						

	Off-Road	1.4544	15.2441	14.6648	0.0228	0.8246	0.7586
	Paving	0.4752				0	0
	Total	**1.9296**	**15.2441**	**14.6648**	**0.0228**	**0.8246**	**0.7586**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0	0	0	0	0	0
	Worker	0.0806	0.0515	0.6192	1.85E-03	0.1633	0.0442
	Total	**0.0806**	**0.0515**	**0.6192**	**1.85E-03**	**0.1633**	**0.0442**
TOTAL		***2.0102***	***15.2956***	***15.2840***	***0.0247***	***0.9879***	***0.8028***

Onsite **2019** Winter

	Off-Road	1.4544	15.2441	14.6648	0.0228	0.8246	0.7586
	Paving	0.4752				0	0
	Total	**1.9296**	**15.2441**	**14.6648**	**0.0228**	**0.8246**	**0.7586**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0	0	0	0	0	0
	Worker	0.0848	0.0652	0.5664	1.68E-03	0.1633	0.0442
	Total	**0.0848**	**0.0652**	**0.5664**	**1.68E-03**	**0.1633**	**0.0442**
TOTAL		***2.0144***	***15.3093***	***15.2312***	***0.0245***	***0.9879***	***0.8028***

Onsite **2019**

	Off-Road	1.4544	15.2441	14.6648	0.0228	0.8246	0.7586
	Paving	0.4752	0	0	0	0	0
	Total	**1.9296**	**15.2441**	**14.6648**	**0.0228**	**0.8246**	**0.7586**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0	0	0	0	0	0
	Worker	0.0848	0.0652	0.6192	0.00185	0.1633	0.0442
	Total	**0.0848**	**0.0652**	**0.6192**	**0.00185**	**0.1633**	**0.0442**
TOTAL		***2.0144***	***15.3093***	***15.2840***	***0.0247***	***0.9879***	***0.8028***

Building Construction & Asphalt Paving		***6.71***	***53.41***	***48.46***	***0.13***	***6.42***	***3.24***

Architectural Coating

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2019** Summer						
	Archit. Coating	2.1304				0	0
	Off-Road	0.2664	1.8354	1.8413	2.97E-03	0.1288	0.1288
	Total	**2.3969**	**1.8354**	**1.8413**	**2.97E-03**	**0.1288**	**0.1288**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0	0	0	0	0	0
	Worker	0.3063	0.1958	2.353	7.02E-03	0.6206	0.1681
	Total	**0.3063**	**0.1958**	**2.353**	**7.02E-03**	**0.6206**	**0.1681**
TOTAL		***2.7032***	***2.0312***	***4.1943***	***0.0100***	***0.7494***	***0.2969***

Onsite **2019** Winter

	Archit. Coating	2.1304				0	0
	Off-Road	0.2664	1.8354	1.8413	2.97E-03	0.1288	0.1288
	Total	**2.3969**	**1.8354**	**1.8413**	**2.97E-03**	**0.1288**	**0.1288**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0	0	0	0	0	0
	Worker	0.3222	0.2477	2.1521	6.37E-03	0.6206	0.1681
	Total	**0.3222**	**0.2477**	**2.1521**	**6.37E-03**	**0.6206**	**0.1681**

TOTAL			***2.7191***	***2.0831***	***3.9934***	***0.0093***	***0.7494***	***0.2969***
Onsite		**2019**						
	Archit. Coating		2.1304	0	0	0	0	0
	Off-Road		0.2664	1.8354	1.8413	0.00297	0.1288	0.1288
	Total		**2.3969**	**1.8354**	**1.8413**	**0.00297**	**0.1288**	**0.1288**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0	0	0	0	0	0
	Worker		0.3222	0.2477	2.353	0.00702	0.6206	0.1681
	Total		**0.3222**	**0.2477**	**2.353**	**0.00702**	**0.6206**	**0.1681**
TOTAL			***2.7191***	***2.0831***	***4.1943***	***0.0100***	***0.7494***	***0.2969***
	Building Construction, Paving, & Architectural Coating		***9.43***	***55.49***	***52.66***	***0.14***	***7.16***	***3.54***
MAX DAILY			**10.19**	**124.22**	**66.85**	**0.20**	**30.54**	**8.13**
Regional Thresholds			**N/A**	**N/A**	**N/A**	**N/A**	**80**	**N/A**
Exceeds Thresholds?			No	No	No	No	No	No

Regional Operation Emissions Worksheet: Annual*

*CalEEMod, Version 2016.3.2

1995 Certified EIR Approved Project

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Highway Commercial	74.1	132.3	730.5	14.1	47.4	n/a
Community Commercial	24.1	42.9	237.1	4.6	15.4	n/a
Professional Office	12.9	22.4	134.4	2.4	64.0	n/a
Light Industrial	18.5	32.1	193.4	3.5	91.2	n/a
Total	**130**	**230**	**1,295**	**25**	**218**	**0**

Remaining Approved Project 2020

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	25.541	0.0005	0.052	0	0.0002	0.0002
Energy	0.469	4.263	3.581	0.026	0.324	0.324
Mobile - Cars	24.843	137.602	262.812	0.805	68.184	18.873
Mobile - Trucks	1.266	9.226	22.798	0.096	7.890	2.178
Total	**52.119**	**141.865**	**289.243**	**0.831**	**68.508**	**19.197**

Proposed Project 2020

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	2.327	0.000	0.006	0.000	0.000	0.000
Energy	0.010	0.093	0.078	0.001	0.007	0.007
Mobile - Cars	0.191	0.362	2.638	0.008	0.777	0.211
Mobile - Trucks	0.777	23.919	4.493	0.082	2.066	0.640
Off-Road	0.0000	7.943	186.614	0.020	22.905	1.943
Total	**3.305**	**32.318**	**193.829**	**0.111**	**25.755**	**2.801**

Net Change

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	-23.214	0.000	-0.046	0.000	0.000	0.000
Energy	-0.459	-4.170	-3.503	-0.025	-0.317	-0.317
Mobile	-24.652	-137.240	-260.174	-0.797	-67.407	-18.662
Mobile - Trucks	-0.490	14.693	-18.305	-0.013	-5.824	-1.539
Off-Road	0.000	7.943	186.614	0.020	22.905	1.943
Total	**-48.814**	**-118.774**	**-95.413**	**-0.816**	**-50.643**	**-18.575**
Regional Thresholds	**10**	**10**	**n/a**	**n/a**	**n/a**	**n/a**
Exceeds Thresholds?	No	No	No	No	No	No

Regional Operation Emissions Worksheet: Daily*

*CalEEMod, Version 2016.3.2

1995 Certified EIR Approved Project

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Highway Commercial	406.0	724.8	4,002.8	77.1	259.6	n/a
Community Commercial	131.8	235.2	1,299.2	25.0	84.2	n/a
Professional Office	70.6	122.5	736.6	13.3	350.8	n/a
Light Industrial	101.4	175.7	1,059.6	19.1	499.8	n/a
Total	**710**	**1,258**	**7,098**	**135**	**1,194**	**0**

Remaining Approved Project 2020

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	139.9779	5.38E-03	0.5824	4.00E-05	2.09E-03	2.09E-03
Energy	2.5696	23.3596	19.6221	1.40E-01	1.7753	1.7753
Mobile - Cars	190.0185	886.6568	1,814.86	6.3868	467.5434	128.935
Mobile - Trucks	7.3589	47.8179	140.55	0.5596	44.8025	12.3259
Total	**339.9249**	**957.83968**	**1975.6201**	**7.08664**	**514.12329**	**143.03829**

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	139.9779	5.38E-03	0.5824	4.00E-05	2.09E-03	2.09E-03
Energy	2.5696	23.3596	19.6221	1.40E-01	1.7753	1.7753
Mobile - Cars	160.5454	929.35	1,862.65	5.9069	467.62	129.01
Mobile - Trucks	7.0048	52.73	127.59	0.5192	44.80	12.33
Total	**310.0977**	**1005.44528**	**2010.4387**	**6.56634**	**514.20409**	**143.11549**

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	139.978	0.005	0.582	0.000	0.002	0.002
Energy	2.570	23.360	19.622	0.140	1.775	1.775
Mobile - Cars	190.019	929.354	1,862.646	6.387	467.623	129.011
Mobile - Trucks	7.359	52.726	140.554	0.560	44.803	12.327
Total	**339.925**	**1,005.445**	**2,010.439**	**7.087**	**514.204**	**143.115**

Proposed Project 2020

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	12.7524	6.60E-04	0.0716	1.00E-05	2.60E-04	2.60E-04
Energy	0.0562	0.5113	0.4295	3.07E-03	0.0389	0.0389
Mobile - Cars	1.2096	1.8081	15.7546	0.0481	4.4154	1.1934
Mobile - Trucks	4.2392	126.6248	24.3536	0.4542	11.6729	3.5919
Off-Road	0	43.3601	1,020.22	0.1089	148.1644	12.9196
Total	**18.2574**	**172.30496**	**1060.8264**	**0.61428**	**1.64E+02**	**17.74406**

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	12.7524	6.60E-04	0.0716	1.00E-05	2.60E-04	2.60E-04
Energy	0.0562	0.5113	0.4295	3.07E-03	0.0389	0.0389
Mobile - Cars	1.033	2.1729	15.1967	0.0438	4.4154	1.1934
Mobile - Trucks	4.2957	133.1193	25.2751	0.4504	11.6773	3.5961
Off-Road	0	43.4507	1,019.84	0.1077	148.1644	12.9196
Total	**18.1373**	**179.25486**	**1060.8093**	**0.60498**	**1.64E+02**	**17.74826**

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	12.752	0.001	0.072	0.000	0.000	0.000
Energy	0.056	0.511	0.430	0.003	0.039	0.039
Mobile - Cars	1.210	2.173	15.755	0.048	4.415	1.193
Mobile - Trucks	4.296	133.119	25.275	0.454	11.677	3.596
Off-Road	0.000	43.451	1,020.217	0.109	148.164	12.920
Total	**18.257**	**179.255**	**1,060.826**	**0.614**	**164.296**	**17.748**

Net Change

Summer

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	-127.226	-0.005	-0.511	0.000	-0.002	-0.002
Energy	-2.513	-22.848	-19.193	-0.137	-1.736	-1.736
Mobile - Cars	-188.809	-884.849	-1,799.107	-6.339	-463.128	-127.742
Mobile - Trucks	-3.120	78.807	-116.200	-0.105	-33.130	-8.734
Off-Road	0.000	43.360	1,020.217	0.109	148.164	12.920
Total	**-321.6675**	**-785.53472**	**-914.7937**	**-6.47236**	**-349.83143**	**-125.29423**

Winter

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	-127.226	-0.005	-0.511	0.000	-0.002	-0.002
Energy	-2.513	-22.848	-19.193	-0.137	-1.736	-1.736
Mobile - Cars	-159.512	-927.181	-1,847.450	-5.863	-463.208	-127.818
Mobile - Trucks	-2.709	80.393	-102.313	-0.069	-33.126	-8.731
Off-Road	0.000	43.451	1,019.836	0.108	148.164	12.920
Total	**-291.9604**	**-826.19042**	**-949.6294**	**-5.96136**	**-349.91**	**-125.36723**

Max Daily

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	-127.226	-0.005	-0.511	0.000	-0.002	-0.002
Energy	-2.513	-22.848	-19.193	-0.137	-1.736	-1.736
Mobile - Cars	-159.512	-884.849	-1,799.107	-5.863	-463.128	-127.742
Mobile - Trucks	-2.709	80.393	-102.313	-0.069	-33.126	-8.731
Off-Road	0.000	43.451	1,020.217	0.109	148.164	12.920
Total	**-291.960**	**-785.535**	**-914.794**	**-5.961**	**-349.831**	**-125.294**
Regional Thresholds	**n/a**	**n/a**	**n/a**	**n/a**	**80**	**n/a**
Exceeds Thresholds?	No	No	No	No	Yes	No

GHG Emissions Inventory

Proposed Project Buildout

Construction

	$MTCO_2e$ Total*
2019	1,080
Total Construction	**1,080**

*CalEEMod, Version 2016.3.2.

Operation*

Remaining Approved		
Area	**0.1081**	$MTCO_2e$/Year**
Energy	**23,220**	$MTCO_2e$/Year
Mobile	**91,978**	$MTCO_2e$/Year
Solid Waste	**3,064**	$MTCO_2e$/Year
Water	**1,971**	$MTCO_2e$/Year
Total	**120,233**	**$MTCO_2e$/Year**
Proposed		
Area	**0**	$MTCO_2e$/Year**
Energy	**1,551**	$MTCO_2e$/Year
Mobile	**8,594**	$MTCO_2e$/Year
Solid Waste	**237**	$MTCO_2e$/Year
Water	**206**	$MTCO_2e$/Year
Off-Road Equipment	**2,608**	$MTCO_2e$/Year
Total	**13,196**	**$MTCO_2e$/Year**
Net Change		
Area	**0**	$MTCO_2e$/Year**
Energy	**-21,669**	$MTCO_2e$/Year
Mobile	**-83,383**	$MTCO_2e$/Year
Solid Waste	**-2,827**	$MTCO_2e$/Year
Water	**-1,766**	$MTCO_2e$/Year
Off-Road Equipment	**2,608**	$MTCO_2e$/Year
Total	**-107,037**	**$MTCO_2e$/Year**
SCAQMD Bright-Line Screening Threshold	1,100	$MTCO_2e$/Year
Exceed Threshold?	**No**	

*CalEEMod, Version 2016.3.2.

** $MTCO_2e$=metric tons of carbon dioxide equivalent.

CalEEMod Project Characteristics Inputs (Operation): Proposed Project

Name:	Dixon Northeast Quadrant Specific Plan EIR Addendum
Project Location:	
County/Air Basin:	Solano County - Sacramento
Climate Zone:	2 or 4
Land Use Setting:	Rural
Operational Year:	2020
Utility Company:	PG&E
Air Basin:	Sacramento Valley Air Basin
Air District:	Yolo-Solano AQMD

Total Project Site Area 31.49 acres

Project Components	SQFT	Footprint	Acres
Warehouse Building	492,264	492,264	11.30
Office	10,000	10,000	0.23
	502,264	502,264	11.53

Parking

Stall Type	Number of Spaces	Space Size	Total Area
Standard	110	180	19,800
Trailer	289	550	158,950

CalEEMod Land Use Inputs (Passenger Vehicles and Truck Only Model Runs)

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet
Warehouse Building	Industrial	Unrefrigerated Warehouse-No Rail	502.264	1000 sqft	11.53	502,264
Parking Lot	Parking	Parking Lot	4.104	acres	4.10	178,750
Other Non-Asphalt	Parking	Other Non-Asphalt	15.853	acres	15.85	0
					31.49	

Trip Generation

Warehouse

Trip Generation*	703	Average Daily Trips (ADT)	Not used since we are separating into 2 model runs for operation.
Trip Generation Passenger Vehicles	492	Average Daily Trips (ADT)	For the Passenger Vehicle Model Run
Trip Generation Trucks	211	Average Daily Trips (ADT)	For the Truck Model Run

Land Use	Calculated Weekday Trip Rate
Warehouse	1.40

*Based on data compiled by PlaceWorks.

Daily Trips

	Weekday	Saturday	Sunday
Total Passenger Vehicle Trips	492	492	492
Total Truck Trips	211	210	210

	Weekday	Saturday	Sunday
Warehouse - Passenger Vehicle	0.98	0.98	0.98
Warehouse - Trucks	0.421	0.418	0.418

	Percent ADT	Trips	Type	Average VMT/Trip[1]	Miles/day	Percent VMT	Normalized % Truck VMT
Trucks	30%	211	HDT	60.0	12,660	68.20%	100%
				Truck only VMT	12,660	68%	

Source:

[1] Based on location of the project site to Port of Oakland.

Onsite Equipment

	Number of Pallets[1]	Number of Forklifts[1]
Warehousing Project #1	8,881	4
Warehousing Project #2	7,354	4
Warehousing Project #3	3,622	1
Warehousing Project #4	2,812	1
Warehousing Project #5	4,815	2
	Estimated # of Pallets[2]	**Forecast # of Forklifts**
Proposed Project	78,466	45

Forklifts	Shift	Hours/shift	Hours/Day/Unit	Operational Hours	Fuel Type
45	2	10	20	900	**CNG**

Sources:

[1] Based on other warehousing projects.

[2] Raymond Handling Pallet Space Calculator. http://raymondhandling.com/learn/tools/pallet-space-calculator/

Water Use

Septic Tank	0%				
Aerobic	100%				
Facultative Lagoons	0%				
Warehouse Indoor Water Use:[1]	116,147,625	gallons/year	Outdoor Water Use:[2]	2,122,436	gallons/year

[1] CalEEMod default

[2] California Department of Water Resource Open Space Irrigation worksheet.

Solid Waste CalEEMod Defaults

Warehouse Solid Waste Generation:* 472.12 tons/year

**CalEEMod default*

Water Mitigation

Install Low Flow Bathroom Faucet	32	% Reduction in flow
Install Low Flow Kitchen Faucet	18	% Reduction in flow
Install Low Flow Toilet	20	% Reduction in flow
Install Low Flow Shower	20	% Reduction in flow
Use Water Efficiency Irrigation System	6.1	% Reduction in flow

Architectural Coating

Land Use	Land Use Amount	Paintable Surface Area Factor	Total Paintable Surface Area	Interior Area	Exterior Area
Warehouse Building	502,264	2	1,004,528	753,396	251,132
			Total Building	**753,396**	**251,132**
Parking Lot	178,750	0.06	10,725	na	10,725

CalEEMod Project Characteristics Inputs (Operation): Undeveloped Approved Project

Name: Dixon Northeast Quadrant Specific Plan EIR Addendum
Project Location:
County/Air Basin: Solano County - Sacramento
Climate Zone: 4-Jan
Land Use Setting: Rural
Operational Year: 2020
Utility Company: PG&E
Air Basin: Sacramento Valley Air Basin
Air District: Yolo-Solano AQMD

Total Project Site Area 31.49 acres

Project Components	SQFT	Footprint	Acres
Highway Commercial	1,328,600	1,328,600	142.20
Community Commercial	560,800		51.90
Professional Office	1,377,000		105.40
Light Industrial	2,272,500		214.40
ROW/Open Space	0		129.10
	5,538,900	1,328,600	643

CalEEMod Land Use Inputs (Passenger Vehicles and Truck Only Model Runs)

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet
Highway Commercial	Retail	Regional Shopping Center	1,328.600	1000 sqft	142.20	1,328,600
Community Commercial	Retail	Strip Mall	560.800	1000 sqft	51.90	560,800
Professional Office	Commercial	General Office	1,377.000	1000 sqft	105.40	1,377,000
Light Industrial	Industrial	Light Industrial	2,272.500	1000 sqft	214.40	2,272,500
ROW/Open Space	Parking	Other Asphalt Surface	129.100	acres	129.10	0
					643.00	

Trip Generation
Warehouse

Trip Generation*	86,407	Average Daily Trips (ADT)	Not used since we are separating into 2 model runs for operation.

*As compiled by PlaceWorks.

Trip Generation
Light Industrial

Weekday Trip Generation	1.4	ADT/1000BSF	
Trip Generation[1]	3,182	Average Daily Trips (ADT)	Not used since we are separating into 2 model runs for operation.
Trip Generation Passenger Vehicles (70%)[2]	2,227	Average Daily Trips (ADT)	For the Passenger Vehicle Model Run
Trip Generation Trucks (30%)[2]	955	Average Daily Trips (ADT)	For the Truck Model Run

1 Trip generation rates for peak hour of adjacent streets, per the ITE Trip Generation Manual 10th Edition
2 Vehicle mix source:SCAQMD High Cube Warehouse Trip Generation Study 2016

Land Use		Average Daily Trip Generation*	Calculated Weekday Trip Rate	
Regional Shopping Center		27,741.67	20.88	20.88037533
Strip Mall		27,741.67	49.47	49.46802187
General Office		27,741.67	20.15	20.14645364
Light Industrial		3,182.00	1.40	1.400220022
	Total	**86,407**		

*Assumes equal distribution for purposes of this analysis.

Trip Rate Type	Regional Shopping Center	Strip Mall	General Office
ITE Weekday Trip Rate*	42.7	44.32	11.03
Adjusted Weekday Trip Rate	20.88	49.47	20.15
Adjustment Factor	48.90%	111.62%	182.65%
ITE Saturday Trip Rate*	49.97	42.04	2.46
Adjusted Saturday Trip Rate	24.44	46.92	4.49
ITE Sunday Trip Rate*	25.24	20.43	1.05
Adjusted Sunday Trip Rate	12.34	22.80	1.92

*Based on CalEEMod defaults which utilizes the 9th Edition ITE Trip Generation Handbook.

Land Use	Calculated Weekday Trip Rate
Light Industrial	1.40

*Based on data compiled by PlaceWorks.

	Daily Trips		
	Weekday	**Saturday**	**Sunday**
Total Passenger Vehicle Trips	2227	2227	2227
Total Truck Trips	955	955	955

	Weekday	**Saturday**	**Sunday**
Warehouse - Passenger Vehicle	0.98	0.98	0.98
Warehouse - Trucks	0.420	0.420	0.420

	Percent ADT	**Trips**	**Type**	**Average VMT/Trip[1]**	**Miles/day**
Trucks	30%	955	HDT	60.0	57,276
				Truck only VMT	57,276

Source:

[1] Based on location of the project site to Port of Oakland.

Water Use

Septic Tank	0%
Aerobic	100%
Facultative Lagoons	0%

Land Use		Indoor Water (gal/yr)	Outdoor Water (gal/yr)	Total (gal/yr)
Highway Commercial		98,412,752.04	60,317,493.19	158,730,245.23
Community Commercial		41,539,870.05	25,459,920.35	66,999,790.40
Professional Office		244,739,370.99	150,001,549.96	394,740,920.95
Light Industrial		525,515,625.00	0	525,515,625.00
ROW/Open Space		0	153,820,242.24	153,820,242.24
	Total	**910,207,618.08**	**389,599,205.74**	**1,299,806,823.82**

Solid Waste

	CalEEMod Defaults	
Highway Commercial	1395.03	tons/year
Community Commercial	588.84	tons/year
Professional Office	1280.61	tons/year
Light Industrial	2817.9	tons/year
ROW/Open Space	11.1	tons/year
Total	**6093.48**	**tons/year**

**CalEEMod default*

Water Mitigation

Install Low Flow Bathroom Faucet	32	% Reduction in flow
Install Low Flow Kitchen Faucet	18	% Reduction in flow
Install Low Flow Toilet	20	% Reduction in flow
Install Low Flow Shower	20	% Reduction in flow
Use Water Efficiency Irrigation System	6.1	% Reduction in flow

Architectural Coating

Land Use	Land Use Amount	Paintable Surface Area Factor	Total Paintable Surface Area	Interior Area	Exterior Area
Highway Commercial	1,328,600	2	2,657,200	1,992,900	664,300
Community Commercial	560,800	2	1,121,600	841,200	280,400
Professional Office	1,377,000	2	2,754,000	2,065,500	688,500
Light Industrial	2,272,500	2	4,545,000	3,408,750	1,136,250
			Total Building	**8,308,350**	**2,769,450**

Energy

For purposes of this analysis, assumes buildings would meet the 2016 Building Energy Efficiency Standards.

Changes to the CalEEMod Defaults - Fleet Mix 2020 (Passenger Cars)

Passenger ADT: 492
Total ADTs: 703

Commercial Default	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix (Model Default)	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119	100%
Trips	407	26	123	82	14	4	7	30	2	2	5	0	1	703
Percent	94%					2%		4%						100%
Proportion	0.619373	0.040285	0.187014	0.124150	0.021893	0.249687	0.424888	1.000000	0.143566	0.104692	0.007284	0.027167	0.050000	
Assumed Mix	69.99%					0.00%		30.01%						100.00%
adjusted with Assumed	0.433473	0.028194	0.130883	0.086888	0.015322	0	0	0	0	0	0.005098	0	0	70%
Trips	305	20	92	61	11	0	0	0	0	0	4	0	0	492
	43%	3%	13%	9%	2%	0%	0%	0%	0%	0%	1%	0%	0%	70%
Modified	**0.619373**	**0.040285**	**0.187014**	**0.124150**	**0.021893**	**0**	**0**	**0**	**0**	**0**	**0.007284**	**0**	**0**	**100.0%**
Final Check Trips	305	20	92	61	11	0	0	0	0	0	4	0	0	492
	100%			12%				2.19%						

Changes to the CalEEMod Defaults - Fleet Mix 2020 (Trucks)

Truck ADT: 211
Total ADTs: 703

Commercial Default	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
FleetMix (Model Default)	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119	100%
Trips	407	26	123	82	14	4	7	30	2	2	5	0	1	703
Percent	94%					2%		4%						100%
Proportion	0.619373	0.040285	0.187014	0.124150	0.021893	0.249687	0.424888	1.000000	0.143566	0.104692	0.007284	0.027167	0.050000	
Assumed Mix	69.99%					0.00%		30.01%						100.00%
adjusted with Assumed	0	0	0	0	0	0.000000	0.000000	0.300142	0.000000	0.000000	0	0.000000	0.000000	30%
Trips	0	0	0	0	0	0	0	211	0	0	0	0	0	211
	0%	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	30%
Modified	**0.000000**	**0.000000**	**0.000000**	**0.000000**	**0.000000**	**0.000000**	**0.000000**	**1.000000**	**0.000000**	**0.000000**	**0.000000**	**0.000000**	**0.000000**	**100.0%**
Trips Check	0	0	0	0	0	0	0	211	0	0	0	0	0	211
Assumed MDV/HDT Mix	0%					0.00%		100.00%						
MDT truck adjustment (no buses or MH)														0%
Adjusted MHD Fleet Mix														0%
Assumed Truck Mix	**0**	**0**	**0**	**0**	**0**	**0.000000**	**0.000000**	**1.000000**	**0**	**0**	**0**	**0**	**0**	
Trips - Final Check				0	0	0	0	211	0	0	0	0	0	211

CalEEMod Project Characteristics Inputs (Construction)

Name: Dixon Northeast Quadrant Specific Plan EIR Addendum
Project Location:
County/Air Basin: Solano County - Sacramento Air Basin
Climate Zone: 4
Land Use Setting: Rural
Operational Year:
Utility Company: PG&E
Air Basin: Sacramento Valley Air Basin
Air District: Yolo-Solano AQMD

Total Project Site Area 31.49 acres

Project Components	SQFT	Footprint	Acres
Warehouse Building	492,264	492,264	11.30
Office	10,000	10,000	0.23
	502,264	502,264	11.53

Parking

Stall Type	Number of Spaces	Space Size	Total Area
Standard	110	180	19,800
Trailer	289	550	158,950

CalEEMod Land Use Inputs (Passenger Vehicles and Truck Only Model Runs)

Land Use	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet
Warehouse Building	Industrial	Unrefrigerated Warehouse-No Rail	502.264	1000 sqft	11.53	502,264
Parking Lot	Parking	Parking Lot	4.104	acres	4.10	178,750
Other Non-Asphalt	Parking	Other Non-Asphalt	15.853	acres	15.85	0
					31.49	

Soil Haul (Rough Grading Soil Haul)

Activity	Total Import/Export Volume (CY)*	Haul Truck Capacity (CY)**	Haul Distance (miles)*	Total Trip Ends	Total Days*	Trip Ends/Day
Rough Grading	60,000	16	0.123106061	7,500	88	86
Rough Grading	140,000	16	0.265151515	17,500	88	199

**Based on information provided by the Applicant.*
*** CalEEMod Default*

Architectural Coating

Structures	Land Use Square Feet	CalEEMod Paintable Surface Area Multiplier	Total Paintable Surface Area	Paintable Interior Area[1]	Paintable Exterior Area[1]
Warehouse Building	0	2.0	0	0	0
			Non-Residential Total:	0	0
Surface Parking	178,750	0.06	10,725	0	10,725

[1] CalEEMod methodology calculates the paintable interior and exterior areas of a building by multiplying the total paintable surface area by 75 and 25 percent, respectively. For parking lots, the paintable surface area is based on 6 percent of the total surface area of the parking lot.

Construction Activities and Schedule Assumptions*

* Based on information provided by the Applicant.

Construction Activities	Construction Schedule			
	Start Date	End Date	Duration (Calendar Days)	Duration (Work Days)
Rough Grading	2/1/2019	6/1/2019	120	86
Building Construction	6/1/2019	11/15/2019	167	120
Asphalt Paving	7/1/2019	12/1/2019	153	110
Architectural Coating (Parking Lot)	10/13/2019	11/29/2019	47	35

CalEEMod Construction Off-Road Equipment Inputs*

*Based on CalEEMod defaults unless otherwise noted.

Equipment Type	CalEEMod Equipment Type	Unit Amount	Hours/Day	HP	LF*	Worker Trips	CalEEMod Vendor Trips
Rough Grading*							**Default+4**
Dozer	Rubber Tired Dozer	1	8	247	0.4		
Compactors	Roller	2	8	80	0.38		
Motor Grader	Grader	1	8	187	0.41		
Scraper	Scraper	2	8	367	0.48		
Rubber Tired Loader	Rubber Tired Loader	1	8	203	0.36		
Water Truck**		1	8				4
Building Construction							**Default**
Cranes	Cranes	1	7	231	0.29		
Forklifts	Forklifts	3	8	89	0.2		
Generator Sets	Generator Sets	1	8	84	0.74		
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	3	7	97	0.37		
Welders	Welders	1	8	46	0.45		
Asphalt Paving							**Default**
Pavers	Pavers	2	8	130	0.42		
Paving Equipment	Paving Equipment	2	8	132	0.36		
Rollers	Rollers	2	8	80	0.38		
Architectural Coating							**Default**
Air Compressors	Air Compressors	1	6	78	0.48		

*Based on information provided by the Applicant.

**Assumes use of one water truck and four trips per truck.

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Appendix B – Proposed Project: CalEEMod Construction

Construction - Solano-Sacramento County, Annual

Construction

Solano-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	0.00	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Based on information provided by the Applicant.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Based on information provided.

Off-road Equipment - Placeholder for import hauling only.

Off-road Equipment -

Trips and VMT - Based on information provided by the Applicant.

Grading - .

Architectural Coating - Per Applicant.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	251,132.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	753,396.00	0.00
tblConstructionPhase	NumDays	500.00	120.00
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	NumDays	35.00	110.00
tblGrading	MaterialExported	0.00	60,000.00
tblGrading	MaterialExported	0.00	140,000.00
tblLandUse	LandUseSquareFeet	502,260.00	502,264.00
tblLandUse	LandUseSquareFeet	690,426.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

tblTripsAndVMT	HaulingTripLength	20.00	0.12
tblTripsAndVMT	HaulingTripLength	20.00	0.27
tblTripsAndVMT	WorkerTripNumber	0.00	20.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.6660	6.8384	4.2670	0.0118	28.5409	0.2331	28.7740	3.0145	0.2165	3.2310	0.0000	1,074.8756	1,074.8756	0.1869	0.0000	1,079.5473
Maximum	**0.6660**	**6.8384**	**4.2670**	**0.0118**	**28.5409**	**0.2331**	**28.7740**	**3.0145**	**0.2165**	**3.2310**	**0.0000**	**1,074.8756**	**1,074.8756**	**0.1869**	**0.0000**	**1,079.5473**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.6660	6.8384	4.2669	0.0118	0.6923	0.2331	0.9254	0.2356	0.2165	0.4521	0.0000	1,074.8751	1,074.8751	0.1869	0.0000	1,079.5468

Maximum	0.6660	6.8384	4.2669	0.0118	0.6923	0.2331	0.9254	0.2356	0.2165	0.4521	0.0000	1,074.8751	1,074.8751	0.1869	0.0000	1,079.5468

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	97.57	0.00	96.78	92.19	0.00	86.01	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-1-2019	4-30-2019	3.6161	3.6161
2	5-1-2019	7-31-2019	2.3969	2.3969
3	8-1-2019	9-30-2019	1.2936	1.2936
		Highest	3.6161	3.6161

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/1/2019	5/31/2019	5	86	
2	Grading-Haul Import	Grading	2/1/2019	5/31/2019	5	86	
3	Building Construction	Building Construction	5/31/2019	11/14/2019	5	120	
4	Paving	Paving	7/1/2019	11/29/2019	5	110	
5	Architectural Coating	Architectural Coating	10/13/2019	11/29/2019	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 215

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 10,725

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading-Haul Import	Excavators	0	8.00	158	0.38
Grading-Haul Import	Graders	0	8.00	187	0.41
Grading-Haul Import	Rubber Tired Dozers	0	8.00	247	0.40
Grading-Haul Import	Scrapers	0	8.00	367	0.48
Grading-Haul Import	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	18.00	0.00	7,500.00	15.00	9.00	0.12	LD_Mix	HDT_Mix	HHDT
Building Construction	9	286.00	112.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	57.00	0.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading-Haul Import	0	20.00	0.00	17,500.00	15.00	9.00	0.27	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3877	0.0000	0.3877	0.1569	0.0000	0.1569	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1980	2.3130	1.1928	2.4500e-003		0.0975	0.0975		0.0897	0.0897	0.0000	220.0439	220.0439	0.0696	0.0000	221.7844
Total	**0.1980**	**2.3130**	**1.1928**	**2.4500e-003**	**0.3877**	**0.0975**	**0.4852**	**0.1569**	**0.0897**	**0.2466**	**0.0000**	**220.0439**	**220.0439**	**0.0696**	**0.0000**	**221.7844**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	9.3900e-003	0.4059	0.0532	5.1000e-004	0.0341	3.9000e-004	0.0345	3.4900e-003	3.7000e-004	3.8600e-003	0.0000	49.1046	49.1046	9.0100e-003	0.0000	49.3298
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9400e-003	2.9900e-003	0.0285	9.0000e-005	0.8760	6.0000e-005	0.8760	0.0888	5.0000e-005	0.0888	0.0000	7.9560	7.9560	2.1000e-004	0.0000	7.9613
Total	**0.0133**	**0.4089**	**0.0816**	**6.0000e-004**	**0.9101**	**4.5000e-004**	**0.9105**	**0.0923**	**4.2000e-004**	**0.0927**	**0.0000**	**57.0606**	**57.0606**	**9.2200e-003**	**0.0000**	**57.2911**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3877	0.0000	0.3877	0.1569	0.0000	0.1569	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1980	2.3130	1.1928	2.4500e-003		0.0975	0.0975		0.0897	0.0897	0.0000	220.0436	220.0436	0.0696	0.0000	221.7841
Total	**0.1980**	**2.3130**	**1.1928**	**2.4500e-003**	**0.3877**	**0.0975**	**0.4852**	**0.1569**	**0.0897**	**0.2466**	**0.0000**	**220.0436**	**220.0436**	**0.0696**	**0.0000**	**221.7841**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	9.3900e-003	0.4059	0.0532	5.1000e-004	4.5000e-004	3.9000e-004	8.3000e-004	1.3000e-004	3.7000e-004	5.0000e-004	0.0000	49.1046	49.1046	9.0100e-003	0.0000	49.3298
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9400e-003	2.9900e-003	0.0285	9.0000e-005	8.0900e-003	6.0000e-005	8.1500e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	7.9560	7.9560	2.1000e-004	0.0000	7.9613
Total	**0.0133**	**0.4089**	**0.0816**	**6.0000e-004**	**8.5400e-003**	**4.5000e-004**	**8.9800e-003**	**2.2900e-003**	**4.2000e-004**	**2.7100e-003**	**0.0000**	**57.0606**	**57.0606**	**9.2200e-003**	**0.0000**	**57.2911**

3.3 Grading-Haul Import - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0343	0.0000	0.0343	5.2000e-003	0.0000	5.2000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0343**	**0.0000**	**0.0343**	**5.2000e-003**	**0.0000**	**5.2000e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0224	0.9596	0.1264	1.2500e-003	0.1787	9.7000e-004	0.1797	0.0182	9.3000e-004	0.0192	0.0000	118.8314	118.8314	0.0211	0.0000	119.3583

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3800e-003	3.3200e-003	0.0317	1.0000e-004	0.9733	7.0000e-005	0.9734	0.0986	6.0000e-005	0.0987	0.0000	8.8400	8.8400	2.4000e-004	0.0000	8.8459
Total	**0.0267**	**0.9629**	**0.1580**	**1.3500e-003**	**1.1520**	**1.0400e-003**	**1.1531**	**0.1169**	**9.9000e-004**	**0.1178**	**0.0000**	**127.6714**	**127.6714**	**0.0213**	**0.0000**	**128.2042**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0343	0.0000	0.0343	5.2000e-003	0.0000	5.2000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0343**	**0.0000**	**0.0343**	**5.2000e-003**	**0.0000**	**5.2000e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0224	0.9596	0.1264	1.2500e-003	2.1000e-003	9.7000e-004	3.0800e-003	6.0000e-004	9.3000e-004	1.5300e-003	0.0000	118.8314	118.8314	0.0211	0.0000	119.3583
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	4.3800e-003	3.3200e-003	0.0317	1.0000e-004	8.9900e-003	7.0000e-005	9.0600e-003	2.4000e-003	6.0000e-005	2.4600e-003	0.0000	8.8400	8.8400	2.4000e-004	0.0000	8.8459
Total	**0.0267**	**0.9629**	**0.1580**	**1.3500e-003**	**0.0111**	**1.0400e-003**	**0.0121**	**3.0000e-003**	**9.9000e-004**	**3.9900e-003**	**0.0000**	**127.6714**	**127.6714**	**0.0213**	**0.0000**	**128.2042**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1417	1.2647	1.0298	1.6100e-003		0.0774	0.0774		0.0728	0.0728	0.0000	141.0625	141.0625	0.0344	0.0000	141.9216
Total	**0.1417**	**1.2647**	**1.0298**	**1.6100e-003**		**0.0774**	**0.0774**		**0.0728**	**0.0728**	**0.0000**	**141.0625**	**141.0625**	**0.0344**	**0.0000**	**141.9216**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0416	0.9449	0.2673	2.2900e-003	4.5733	7.6500e-003	4.5810	0.4664	7.3200e-003	0.4737	0.0000	216.8333	216.8333	0.0111	0.0000	217.1109
Worker	0.0874	0.0663	0.6315	1.9500e-003	19.4209	1.3100e-003	19.4222	1.9680	1.2000e-003	1.9692	0.0000	176.3886	176.3886	4.7400e-003	0.0000	176.5070

Total	**0.1289**	**1.0113**	**0.8988**	**4.2400e-003**	**23.9942**	**8.9600e-003**	**24.0032**	**2.4343**	**8.5200e-003**	**2.4428**	**0.0000**	**393.2220**	**393.2220**	**0.0158**	**0.0000**	**393.6180**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1417	1.2647	1.0298	1.6100e-003		0.0774	0.0774		0.0728	0.0728	0.0000	141.0624	141.0624	0.0344	0.0000	141.9215
Total	**0.1417**	**1.2647**	**1.0298**	**1.6100e-003**		**0.0774**	**0.0774**		**0.0728**	**0.0728**	**0.0000**	**141.0624**	**141.0624**	**0.0344**	**0.0000**	**141.9215**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0416	0.9449	0.2673	2.2900e-003	0.0523	7.6500e-003	0.0599	0.0152	7.3200e-003	0.0225	0.0000	216.8333	216.8333	0.0111	0.0000	217.1109
Worker	0.0874	0.0663	0.6315	1.9500e-003	0.1794	1.3100e-003	0.1807	0.0479	1.2000e-003	0.0491	0.0000	176.3886	176.3886	4.7400e-003	0.0000	176.5070
Total	**0.1289**	**1.0113**	**0.8988**	**4.2400e-003**	**0.2317**	**8.9600e-003**	**0.2406**	**0.0631**	**8.5200e-003**	**0.0716**	**0.0000**	**393.2220**	**393.2220**	**0.0158**	**0.0000**	**393.6180**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0800	0.8384	0.8066	1.2500e-003		0.0454	0.0454		0.0417	0.0417	0.0000	112.6135	112.6135	0.0356	0.0000	113.5042
Paving	0.0261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1061**	**0.8384**	**0.8066**	**1.2500e-003**		**0.0454**	**0.0454**		**0.0417**	**0.0417**	**0.0000**	**112.6135**	**112.6135**	**0.0356**	**0.0000**	**113.5042**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-003	3.1900e-003	0.0304	9.0000e-005	0.9337	6.0000e-005	0.9338	0.0946	6.0000e-005	0.0947	0.0000	8.4802	8.4802	2.3000e-004	0.0000	8.4859
Total	**4.2000e-003**	**3.1900e-003**	**0.0304**	**9.0000e-005**	**0.9337**	**6.0000e-005**	**0.9338**	**0.0946**	**6.0000e-005**	**0.0947**	**0.0000**	**8.4802**	**8.4802**	**2.3000e-004**	**0.0000**	**8.4859**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0800	0.8384	0.8066	1.2500e-003		0.0454	0.0454		0.0417	0.0417	0.0000	112.6134	112.6134	0.0356	0.0000	113.5041
Paving	0.0261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1061**	**0.8384**	**0.8066**	**1.2500e-003**		**0.0454**	**0.0454**		**0.0417**	**0.0417**	**0.0000**	**112.6134**	**112.6134**	**0.0356**	**0.0000**	**113.5041**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-003	3.1900e-003	0.0304	9.0000e-005	8.6200e-003	6.0000e-005	8.6900e-003	2.3000e-003	6.0000e-005	2.3600e-003	0.0000	8.4802	8.4802	2.3000e-004	0.0000	8.4859
Total	**4.2000e-003**	**3.1900e-003**	**0.0304**	**9.0000e-005**	**8.6200e-003**	**6.0000e-005**	**8.6900e-003**	**2.3000e-003**	**6.0000e-005**	**2.3600e-003**	**0.0000**	**8.4802**	**8.4802**	**2.3000e-004**	**0.0000**	**8.4859**

3.6 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6600e-003	0.0321	0.0322	5.0000e-005		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	4.4682	4.4682	3.8000e-004	0.0000	4.4776
Total	**0.0419**	**0.0321**	**0.0322**	**5.0000e-005**		**2.2500e-003**	**2.2500e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**4.4682**	**4.4682**	**3.8000e-004**	**0.0000**	**4.4776**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0800e-003	3.8600e-003	0.0367	1.1000e-004	1.1289	8.0000e-005	1.1290	0.1144	7.0000e-005	0.1145	0.0000	10.2534	10.2534	2.8000e-004	0.0000	10.2602
Total	**5.0800e-003**	**3.8600e-003**	**0.0367**	**1.1000e-004**	**1.1289**	**8.0000e-005**	**1.1290**	**0.1144**	**7.0000e-005**	**0.1145**	**0.0000**	**10.2534**	**10.2534**	**2.8000e-004**	**0.0000**	**10.2602**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0373					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6600e-003	0.0321	0.0322	5.0000e-005		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	4.4682	4.4682	3.8000e-004	0.0000	4.4776
Total	**0.0419**	**0.0321**	**0.0322**	**5.0000e-005**		**2.2500e-003**	**2.2500e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**4.4682**	**4.4682**	**3.8000e-004**	**0.0000**	**4.4776**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0800e-003	3.8600e-003	0.0367	1.1000e-004	0.0104	8.0000e-005	0.0105	2.7800e-003	7.0000e-005	2.8500e-003	0.0000	10.2534	10.2534	2.8000e-004	0.0000	10.2602
Total	**5.0800e-003**	**3.8600e-003**	**0.0367**	**1.1000e-004**	**0.0104**	**8.0000e-005**	**0.0105**	**2.7800e-003**	**7.0000e-005**	**2.8500e-003**	**0.0000**	**10.2534**	**10.2534**	**2.8000e-004**	**0.0000**	**10.2602**

Construction - Solano-Sacramento County, Summer

Construction

Solano-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	0.00	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Based on information provided by the Applicant.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Based on information provided.

Off-road Equipment - Placeholder for import hauling only.

Off-road Equipment -

Trips and VMT - Based on information provided by the Applicant.

Grading - .

Architectural Coating - Per Applicant.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	251,132.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	753,396.00	0.00
tblConstructionPhase	NumDays	500.00	120.00
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	NumDays	35.00	110.00
tblGrading	MaterialExported	0.00	60,000.00
tblGrading	MaterialExported	0.00	140,000.00
tblLandUse	LandUseSquareFeet	502,260.00	502,264.00
tblLandUse	LandUseSquareFeet	690,426.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.12

tblTripsAndVMT	HaulingTripLength	20.00	0.27
tblTripsAndVMT	WorkerTripNumber	0.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	10.0867	123.6850	65.8846	0.2054	567.9473	3.7380	570.3446	57.4884	3.4707	60.7303	0.0000	20,775.6229	20,775.6229	3.4462	0.0000	20,861.7787
Maximum	**10.0867**	**123.6850**	**65.8846**	**0.2054**	**567.9473**	**3.7380**	**570.3446**	**57.4884**	**3.4707**	**60.7303**	**0.0000**	**20,775.6229**	**20,775.6229**	**3.4462**	**0.0000**	**20,861.7787**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	10.0867	123.6850	65.8846	0.2054	14.2724	3.7380	18.0105	4.9786	3.4707	8.4493	0.0000	20,775.6229	20,775.6229	3.4462	0.0000	20,861.7787
Maximum	**10.0867**	**123.6850**	**65.8846**	**0.2054**	**14.2724**	**3.7380**	**18.0105**	**4.9786**	**3.4707**	**8.4493**	**0.0000**	**20,775.6229**	**20,775.6229**	**3.4462**	**0.0000**	**20,861.7787**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	97.49	0.00	96.84	91.34	0.00	86.09	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/1/2019	5/31/2019	5	86	
2	Grading-Haul Import	Grading	2/1/2019	5/31/2019	5	86	
3	Building Construction	Building Construction	5/31/2019	11/14/2019	5	120	
4	Paving	Paving	7/1/2019	11/29/2019	5	110	
5	Architectural Coating	Architectural Coating	10/13/2019	11/29/2019	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 215

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 10,725

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading-Haul Import	Excavators	0	8.00	158	0.38
Grading-Haul Import	Graders	0	8.00	187	0.41
Grading-Haul Import	Rubber Tired Dozers	0	8.00	247	0.40
Grading-Haul Import	Scrapers	0	8.00	367	0.48
Grading-Haul Import	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	18.00	0.00	7,500.00	15.00	9.00	0.12	LD_Mix	HDT_Mix	HHDT
Building Construction	9	286.00	112.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	57.00	0.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading-Haul Import	0	20.00	0.00	17,500.00	15.00	9.00	0.27	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0155	0.0000	9.0155	3.6483	0.0000	3.6483			0.0000			0.0000
Off-Road	4.6037	53.7898	27.7383	0.0570		2.2684	2.2684		2.0869	2.0869		5,640.8577	5,640.8577	1.7847		5,685.4754
Total	**4.6037**	**53.7898**	**27.7383**	**0.0570**	**9.0155**	**2.2684**	**11.2838**	**3.6483**	**2.0869**	**5.7352**		**5,640.8577**	**5,640.8577**	**1.7847**		**5,685.4754**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2067	9.5983	1.0036	0.0126	0.9347	7.9900e-003	0.9427	0.0953	7.6400e-003	0.1029		1,328.3086	1,328.3086	0.2178		1,333.7546
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0967	0.0618	0.7431	2.2200e-003	24.0358	1.3700e-003	24.0372	2.4309	1.2600e-003	2.4321		220.9589	220.9589	5.9700e-003		221.1081
Total	**0.3034**	**9.6601**	**1.7467**	**0.0149**	**24.9705**	**9.3600e-003**	**24.9798**	**2.5262**	**8.9000e-003**	**2.5351**		**1,549.2675**	**1,549.2675**	**0.2238**		**1,554.8626**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0155	0.0000	9.0155	3.6483	0.0000	3.6483			0.0000			0.0000
Off-Road	4.6037	53.7898	27.7383	0.0570		2.2684	2.2684		2.0869	2.0869	0.0000	5,640.8577	5,640.8577	1.7847		5,685.4754
Total	**4.6037**	**53.7898**	**27.7383**	**0.0570**	**9.0155**	**2.2684**	**11.2838**	**3.6483**	**2.0869**	**5.7352**	**0.0000**	**5,640.8577**	**5,640.8577**	**1.7847**		**5,685.4754**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2067	9.5983	1.0036	0.0126	0.0106	7.9900e-003	0.0186	3.0800e-003	7.6400e-003	0.0107		1,328.3086	1,328.3086	0.2178		1,333.7546
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0967	0.0618	0.7431	2.2200e-003	0.1946	1.3700e-003	0.1960	0.0518	1.2600e-003	0.0531		220.9589	220.9589	5.9700e-003		221.1081
Total	**0.3034**	**9.6601**	**1.7467**	**0.0149**	**0.2052**	**9.3600e-003**	**0.2146**	**0.0549**	**8.9000e-003**	**0.0638**		**1,549.2675**	**1,549.2675**	**0.2238**		**1,554.8626**

3.3 Grading-Haul Import - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7983	0.0000	0.7983	0.1209	0.0000	0.1209			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.7983**	**0.0000**	**0.7983**	**0.1209**	**0.0000**	**0.1209**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4923	22.6715	2.3973	0.0305	4.9016	0.0203	4.9219	0.4983	0.0194	0.5178		3,208.4413	3,208.4413	0.5096		3,221.1814
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1075	0.0687	0.8256	2.4600e-003	26.7064	1.5200e-003	26.7080	2.7010	1.4000e-003	2.7024		245.5099	245.5099	6.6300e-003		245.6756
Total	**0.5997**	**22.7402**	**3.2230**	**0.0330**	**31.6081**	**0.0218**	**31.6299**	**3.1993**	**0.0208**	**3.2201**		**3,453.9512**	**3,453.9512**	**0.5162**		**3,466.8570**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7983	0.0000	0.7983	0.1209	0.0000	0.1209			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.7983**	**0.0000**	**0.7983**	**0.1209**	**0.0000**	**0.1209**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4923	22.6715	2.3973	0.0305	0.0502	0.0203	0.0705	0.0142	0.0194	0.0336		3,208.4413	3,208.4413	0.5096		3,221.1814
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1075	0.0687	0.8256	2.4600e-003	0.2162	1.5200e-003	0.2177	0.0576	1.4000e-003	0.0590		245.5099	245.5099	6.6300e-003		245.6756
Total	**0.5997**	**22.7402**	**3.2230**	**0.0330**	**0.2664**	**0.0218**	**0.2883**	**0.0718**	**0.0208**	**0.0926**		**3,453.9512**	**3,453.9512**	**0.5162**		**3,466.8570**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6821	15.4336	4.2066	0.0385	89.9023	0.1268	90.0291	9.1412	0.1213	9.2625		4,029.1744	4,029.1744	0.1954		4,034.0586
Worker	1.5367	0.9825	11.8063	0.0352	381.9019	0.0218	381.9237	38.6238	0.0201	38.6438		3,510.7918	3,510.7918	0.0948		3,513.1615
Total	**2.2187**	**16.4160**	**16.0129**	**0.0737**	**471.8042**	**0.1486**	**471.9528**	**47.7649**	**0.1414**	**47.9063**		**7,539.9663**	**7,539.9663**	**0.2902**		**7,547.2201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6821	15.4336	4.2066	0.0385	0.8952	0.1268	1.0220	0.2594	0.1213	0.3807		4,029.1744	4,029.1744	0.1954		4,034.0586
Worker	1.5367	0.9825	11.8063	0.0352	3.0918	0.0218	3.1136	0.8233	0.0201	0.8434		3,510.7918	3,510.7918	0.0948		3,513.1615
Total	**2.2187**	**16.4160**	**16.0129**	**0.0737**	**3.9870**	**0.1486**	**4.1356**	**1.0827**	**0.1414**	**1.2241**		**7,539.9663**	**7,539.9663**	**0.2902**		**7,547.2201**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.4752					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9296**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0806	0.0515	0.6192	1.8500e-003	20.0298	1.1400e-003	20.0310	2.0257	1.0500e-003	2.0268		184.1324	184.1324	4.9700e-003		184.2567
Total	**0.0806**	**0.0515**	**0.6192**	**1.8500e-003**	**20.0298**	**1.1400e-003**	**20.0310**	**2.0257**	**1.0500e-003**	**2.0268**		**184.1324**	**184.1324**	**4.9700e-003**		**184.2567**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.4752					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9296**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0806	0.0515	0.6192	1.8500e-003	0.1622	1.1400e-003	0.1633	0.0432	1.0500e-003	0.0442		184.1324	184.1324	4.9700e-003		184.2567
Total	**0.0806**	**0.0515**	**0.6192**	**1.8500e-003**	**0.1622**	**1.1400e-003**	**0.1633**	**0.0432**	**1.0500e-003**	**0.0442**		**184.1324**	**184.1324**	**4.9700e-003**		**184.2567**

3.6 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**2.3969**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3063	0.1958	2.3530	7.0200e-003	76.1133	4.3400e-003	76.1177	7.6977	4.0000e-003	7.7017		699.7033	699.7033	0.0189		700.1755
Total	**0.3063**	**0.1958**	**2.3530**	**7.0200e-003**	**76.1133**	**4.3400e-003**	**76.1177**	**7.6977**	**4.0000e-003**	**7.7017**		**699.7033**	**699.7033**	**0.0189**		**700.1755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**2.3969**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3063	0.1958	2.3530	7.0200e-003	0.6162	4.3400e-003	0.6206	0.1641	4.0000e-003	0.1681		699.7033	699.7033	0.0189		700.1755
Total	**0.3063**	**0.1958**	**2.3530**	**7.0200e-003**	**0.6162**	**4.3400e-003**	**0.6206**	**0.1641**	**4.0000e-003**	**0.1681**		**699.7033**	**699.7033**	**0.0189**		**700.1755**

Construction - Solano-Sacramento County, Winter

Construction

Solano-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	0.00	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Based on information provided by the Applicant.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Based on information provided.

Off-road Equipment - Placeholder for import hauling only.

Off-road Equipment -

Trips and VMT - Based on information provided by the Applicant.

Grading - .

Architectural Coating - Per Applicant.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	251,132.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	753,396.00	0.00
tblConstructionPhase	NumDays	500.00	120.00
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	NumDays	35.00	110.00
tblGrading	MaterialExported	0.00	60,000.00
tblGrading	MaterialExported	0.00	140,000.00
tblLandUse	LandUseSquareFeet	502,260.00	502,264.00
tblLandUse	LandUseSquareFeet	690,426.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.12

tblTripsAndVMT	HaulingTripLength	20.00	0.27
tblTripsAndVMT	WorkerTripNumber	0.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	10.3039	123.0542	67.1914	0.1955	567.9473	3.7476	570.3464	57.4884	3.4799	60.7395	0.0000	19,746.6633	19,746.6633	3.5611	0.0000	19,835.6916
Maximum	**10.3039**	**123.0542**	**67.1914**	**0.1955**	**567.9473**	**3.7476**	**570.3464**	**57.4884**	**3.4799**	**60.7395**	**0.0000**	**19,746.6633**	**19,746.6633**	**3.5611**	**0.0000**	**19,835.6916**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	10.3039	123.0542	67.1914	0.1955	14.2724	3.7476	18.0201	4.9786	3.4799	8.4585	0.0000	19,746.6633	19,746.6633	3.5611	0.0000	19,835.6916
Maximum	**10.3039**	**123.0542**	**67.1914**	**0.1955**	**14.2724**	**3.7476**	**18.0201**	**4.9786**	**3.4799**	**8.4585**	**0.0000**	**19,746.6633**	**19,746.6633**	**3.5611**	**0.0000**	**19,835.6916**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	97.49	0.00	96.84	91.34	0.00	86.07	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/1/2019	5/31/2019	5	86	
2	Grading-Haul Import	Grading	2/1/2019	5/31/2019	5	86	
3	Building Construction	Building Construction	5/31/2019	11/14/2019	5	120	
4	Paving	Paving	7/1/2019	11/29/2019	5	110	
5	Architectural Coating	Architectural Coating	10/13/2019	11/29/2019	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 215

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 10,725

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading-Haul Import	Excavators	0	8.00	158	0.38
Grading-Haul Import	Graders	0	8.00	187	0.41
Grading-Haul Import	Rubber Tired Dozers	0	8.00	247	0.40
Grading-Haul Import	Scrapers	0	8.00	367	0.48
Grading-Haul Import	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	18.00	0.00	7,500.00	15.00	9.00	0.12	LD_Mix	HDT_Mix	HHDT
Building Construction	9	286.00	112.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	57.00	0.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading-Haul Import	0	20.00	0.00	17,500.00	15.00	9.00	0.27	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0155	0.0000	9.0155	3.6483	0.0000	3.6483			0.0000			0.0000
Off-Road	4.6037	53.7898	27.7383	0.0570		2.2684	2.2684		2.0869	2.0869		5,640.8577	5,640.8577	1.7847		5,685.4754
Total	**4.6037**	**53.7898**	**27.7383**	**0.0570**	**9.0155**	**2.2684**	**11.2838**	**3.6483**	**2.0869**	**5.7352**		**5,640.8577**	**5,640.8577**	**1.7847**		**5,685.4754**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2349	9.2122	1.5593	0.0111	0.9347	0.0104	0.9450	0.0953	9.9100e-003	0.1052		1,162.8188	1,162.8188	0.2489		1,169.0414
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1017	0.0782	0.6796	2.0100e-003	24.0358	1.3700e-003	24.0372	2.4309	1.2600e-003	2.4321		200.4621	200.4621	5.4600e-003		200.5986
Total	**0.3366**	**9.2904**	**2.2389**	**0.0131**	**24.9705**	**0.0117**	**24.9822**	**2.5262**	**0.0112**	**2.5373**		**1,363.2809**	**1,363.2809**	**0.2544**		**1,369.6399**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0155	0.0000	9.0155	3.6483	0.0000	3.6483			0.0000			0.0000
Off-Road	4.6037	53.7898	27.7383	0.0570		2.2684	2.2684		2.0869	2.0869	0.0000	5,640.8577	5,640.8577	1.7847		5,685.4754
Total	**4.6037**	**53.7898**	**27.7383**	**0.0570**	**9.0155**	**2.2684**	**11.2838**	**3.6483**	**2.0869**	**5.7352**	**0.0000**	**5,640.8577**	**5,640.8577**	**1.7847**		**5,685.4754**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2349	9.2122	1.5593	0.0111	0.0106	0.0104	0.0210	3.0800e-003	9.9100e-003	0.0130		1,162.8188	1,162.8188	0.2489		1,169.0414
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1017	0.0782	0.6796	2.0100e-003	0.1946	1.3700e-003	0.1960	0.0518	1.2600e-003	0.0531		200.4621	200.4621	5.4600e-003		200.5986
Total	**0.3366**	**9.2904**	**2.2389**	**0.0131**	**0.2052**	**0.0117**	**0.2169**	**0.0549**	**0.0112**	**0.0661**		**1,363.2809**	**1,363.2809**	**0.2544**		**1,369.6399**

3.3 Grading-Haul Import - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7983	0.0000	0.7983	0.1209	0.0000	0.1209			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.7983**	**0.0000**	**0.7983**	**0.1209**	**0.0000**	**0.1209**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5579	21.7900	3.6930	0.0269	4.9016	0.0258	4.9275	0.4983	0.0247	0.5230		2,822.2985	2,822.2985	0.5821		2,836.8504
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1130	0.0869	0.7551	2.2400e-003	26.7064	1.5200e-003	26.7080	2.7010	1.4000e-003	2.7024		222.7357	222.7357	6.0700e-003		222.8873
Total	**0.6710**	**21.8769**	**4.4482**	**0.0291**	**31.6081**	**0.0273**	**31.6354**	**3.1993**	**0.0261**	**3.2254**		**3,045.0342**	**3,045.0342**	**0.5881**		**3,059.7377**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7983	0.0000	0.7983	0.1209	0.0000	0.1209			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.7983**	**0.0000**	**0.7983**	**0.1209**	**0.0000**	**0.1209**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5579	21.7900	3.6930	0.0269	0.0502	0.0258	0.0761	0.0142	0.0247	0.0389		2,822.2985	2,822.2985	0.5821		2,836.8504
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1130	0.0869	0.7551	2.2400e-003	0.2162	1.5200e-003	0.2177	0.0576	1.4000e-003	0.0590		222.7357	222.7357	6.0700e-003		222.8873
Total	**0.6710**	**21.8769**	**4.4482**	**0.0291**	**0.2664**	**0.0273**	**0.2938**	**0.0718**	**0.0261**	**0.0979**		**3,045.0342**	**3,045.0342**	**0.5881**		**3,059.7377**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7150	15.7755	4.8038	0.0375	89.9023	0.1286	90.0309	9.1412	0.1230	9.2642		3,920.7905	3,920.7905	0.2158		3,926.1865
Worker	1.6165	1.2427	10.7984	0.0320	381.9019	0.0218	381.9237	38.6238	0.0201	38.6438		3,185.1199	3,185.1199	0.0868		3,187.2886
Total	**2.3315**	**17.0183**	**15.6022**	**0.0695**	**471.8042**	**0.1503**	**471.9545**	**47.7649**	**0.1431**	**47.9080**		**7,105.9104**	**7,105.9104**	**0.3026**		**7,113.4751**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7150	15.7755	4.8038	0.0375	0.8952	0.1286	1.0238	0.2594	0.1230	0.3824		3,920.7905	3,920.7905	0.2158		3,926.1865
Worker	1.6165	1.2427	10.7984	0.0320	3.0918	0.0218	3.1136	0.8233	0.0201	0.8434		3,185.1199	3,185.1199	0.0868		3,187.2886
Total	**2.3315**	**17.0183**	**15.6022**	**0.0695**	**3.9870**	**0.1503**	**4.1374**	**1.0827**	**0.1431**	**1.2258**		**7,105.9104**	**7,105.9104**	**0.3026**		**7,113.4751**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548

Paving	0.4752					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9296**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0848	0.0652	0.5664	1.6800e-003	20.0298	1.1400e-003	20.0310	2.0257	1.0500e-003	2.0268		167.0517	167.0517	4.5500e-003		167.1655
Total	**0.0848**	**0.0652**	**0.5664**	**1.6800e-003**	**20.0298**	**1.1400e-003**	**20.0310**	**2.0257**	**1.0500e-003**	**2.0268**		**167.0517**	**167.0517**	**4.5500e-003**		**167.1655**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.4752					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Total	**1.9296**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0848	0.0652	0.5664	1.6800e-003	0.1622	1.1400e-003	0.1633	0.0432	1.0500e-003	0.0442		167.0517	167.0517	4.5500e-003		167.1655
Total	**0.0848**	**0.0652**	**0.5664**	**1.6800e-003**	**0.1622**	**1.1400e-003**	**0.1633**	**0.0432**	**1.0500e-003**	**0.0442**		**167.0517**	**167.0517**	**4.5500e-003**		**167.1655**

3.6 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**2.3969**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3222	0.2477	2.1521	6.3700e-003	76.1133	4.3400e-003	76.1177	7.6977	4.0000e-003	7.7017		634.7966	634.7966	0.0173		635.2289
Total	**0.3222**	**0.2477**	**2.1521**	**6.3700e-003**	**76.1133**	**4.3400e-003**	**76.1177**	**7.6977**	**4.0000e-003**	**7.7017**		**634.7966**	**634.7966**	**0.0173**		**635.2289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.1304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**2.3969**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3222	0.2477	2.1521	6.3700e-003	0.6162	4.3400e-003	0.6206	0.1641	4.0000e-003	0.1681		634.7966	634.7966	0.0173		635.2289
Total	**0.3222**	**0.2477**	**2.1521**	**6.3700e-003**	**0.6162**	**4.3400e-003**	**0.6206**	**0.1641**	**4.0000e-003**	**0.1681**		**634.7966**	**634.7966**	**0.0173**		**635.2289**

Construction With EIR Mit

Solano-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	0.00	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Based on information provided by the Applicant.

Off-road Equipment -

Off-road Equipment - Based on information provided.

Off-road Equipment - Placeholder for import hauling only.

Trips and VMT - Based on information provided by the Applicant.

Grading - .

Architectural Coating - Per Applicant.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	PhaseEndDate	4/4/2019	5/31/2019
tblConstructionPhase	PhaseEndDate	6/6/2019	5/31/2019
tblConstructionPhase	PhaseStartDate	4/5/2019	2/1/2019
tblGrading	MaterialExported	0.00	60,000.00
tblGrading	MaterialImported	0.00	140,000.00
tblLandUse	LandUseSquareFeet	502,260.00	502,264.00
tblLandUse	LandUseSquareFeet	690,426.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.12
tblTripsAndVMT	HaulingTripLength	20.00	0.27

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2336	3.6815	1.4008	4.3000e-003	1.5108	0.0990	1.6097	0.2726	0.0911	0.3636	0.0000	395.9359	395.9359	0.0999	0.0000	398.4338
Maximum	**0.2336**	**3.6815**	**1.4008**	**4.3000e-003**	**1.5108**	**0.0990**	**1.6097**	**0.2726**	**0.0911**	**0.3636**	**0.0000**	**395.9359**	**395.9359**	**0.0999**	**0.0000**	**398.4338**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2336	3.6815	1.4008	4.3000e-003	0.8606	0.0990	0.9596	0.1416	0.0911	0.2327	0.0000	395.9356	395.9356	0.0999	0.0000	398.4336
Maximum	**0.2336**	**3.6815**	**1.4008**	**4.3000e-003**	**0.8606**	**0.0990**	**0.9596**	**0.1416**	**0.0911**	**0.2327**	**0.0000**	**395.9356**	**395.9356**	**0.0999**	**0.0000**	**398.4336**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**43.03**	**0.00**	**40.39**	**48.05**	**0.00**	**36.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-1-2019	4-30-2019	3.6039	3.6039
2	5-1-2019	7-31-2019	1.2697	1.2697
		Highest	3.6039	3.6039

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/1/2019	5/31/2019	5	86	
2	Grading-Haul Import	Grading	2/1/2019	5/31/2019	5	86	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 215

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Grading-Haul Import	Excavators	0	8.00	158	0.38
Grading-Haul Import	Graders	0	8.00	187	0.41
Grading-Haul Import	Rubber Tired Dozers	0	8.00	247	0.40
Grading-Haul Import	Scrapers	0	8.00	367	0.48
Grading-Haul Import	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	18.00	0.00	7,500.00	15.00	9.00	0.12	LD_Mix	HDT_Mix	HHDT
Grading-Haul Import	0	0.00	0.00	17,500.00	15.00	9.00	0.27	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3877	0.0000	0.3877	0.1569	0.0000	0.1569	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1980	2.3130	1.1928	2.4500e-003		0.0975	0.0975		0.0897	0.0897	0.0000	220.0439	220.0439	0.0696	0.0000	221.7844
Total	**0.1980**	**2.3130**	**1.1928**	**2.4500e-003**	**0.3877**	**0.0975**	**0.4852**	**0.1569**	**0.0897**	**0.2466**	**0.0000**	**220.0439**	**220.0439**	**0.0696**	**0.0000**	**221.7844**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.3900e-003	0.4059	0.0532	5.1000e-004	0.0341	3.9000e-004	0.0345	3.4900e-003	3.7000e-004	3.8600e-003	0.0000	49.1046	49.1046	9.0100e-003	0.0000	49.3298
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9400e-003	2.9900e-003	0.0285	9.0000e-005	0.8760	6.0000e-005	0.8760	0.0888	5.0000e-005	0.0888	0.0000	7.9560	7.9560	2.1000e-004	0.0000	7.9613
Total	**0.0133**	**0.4089**	**0.0816**	**6.0000e-004**	**0.9101**	**4.5000e-004**	**0.9105**	**0.0923**	**4.2000e-004**	**0.0927**	**0.0000**	**57.0606**	**57.0606**	**9.2200e-003**	**0.0000**	**57.2911**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1745	0.0000	0.1745	0.0706	0.0000	0.0706	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1980	2.3130	1.1928	2.4500e-003		0.0975	0.0975		0.0897	0.0897	0.0000	220.0436	220.0436	0.0696	0.0000	221.7841
Total	**0.1980**	**2.3130**	**1.1928**	**2.4500e-003**	**0.1745**	**0.0975**	**0.2720**	**0.0706**	**0.0897**	**0.1603**	**0.0000**	**220.0436**	**220.0436**	**0.0696**	**0.0000**	**221.7841**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.3900e-003	0.4059	0.0532	5.1000e-004	0.0210	3.9000e-004	0.0214	2.1800e-003	3.7000e-004	2.5500e-003	0.0000	49.1046	49.1046	9.0100e-003	0.0000	49.3298
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9400e-003	2.9900e-003	0.0285	9.0000e-005	0.5395	6.0000e-005	0.5395	0.0551	5.0000e-005	0.0552	0.0000	7.9560	7.9560	2.1000e-004	0.0000	7.9613
Total	**0.0133**	**0.4089**	**0.0816**	**6.0000e-004**	**0.5605**	**4.5000e-004**	**0.5609**	**0.0573**	**4.2000e-004**	**0.0577**	**0.0000**	**57.0606**	**57.0606**	**9.2200e-003**	**0.0000**	**57.2911**

3.3 Grading-Haul Import - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0343	0.0000	0.0343	5.2000e-003	0.0000	5.2000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0343**	**0.0000**	**0.0343**	**5.2000e-003**	**0.0000**	**5.2000e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0224	0.9596	0.1264	1.2500e-003	0.1787	9.7000e-004	0.1797	0.0182	9.3000e-004	0.0192	0.0000	118.8314	118.8314	0.0211	0.0000	119.3583
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0224**	**0.9596**	**0.1264**	**1.2500e-003**	**0.1787**	**9.7000e-004**	**0.1797**	**0.0182**	**9.3000e-004**	**0.0192**	**0.0000**	**118.8314**	**118.8314**	**0.0211**	**0.0000**	**119.3583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0155	0.0000	0.0155	2.3400e-003	0.0000	2.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0155**	**0.0000**	**0.0155**	**2.3400e-003**	**0.0000**	**2.3400e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0224	0.9596	0.1264	1.2500e-003	0.1102	9.7000e-004	0.1112	0.0114	9.3000e-004	0.0123	0.0000	118.8314	118.8314	0.0211	0.0000	119.3583
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0224**	**0.9596**	**0.1264**	**1.2500e-003**	**0.1102**	**9.7000e-004**	**0.1112**	**0.0114**	**9.3000e-004**	**0.0123**	**0.0000**	**118.8314**	**118.8314**	**0.0211**	**0.0000**	**119.3583**

Construction With EIR Mit - Solano-Sacramento County, Summer

Construction With EIR Mit

Solano-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	0.00	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Based on information provided by the Applicant.

Off-road Equipment -

Off-road Equipment - Based on information provided.

Off-road Equipment - Placeholder for import hauling only.

Trips and VMT - Based on information provided by the Applicant.

Grading - .

Architectural Coating - Per Applicant.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	PhaseEndDate	4/4/2019	5/31/2019
tblConstructionPhase	PhaseEndDate	6/6/2019	5/31/2019
tblConstructionPhase	PhaseStartDate	4/5/2019	2/1/2019
tblGrading	MaterialExported	0.00	60,000.00
tblGrading	MaterialImported	0.00	140,000.00
tblLandUse	LandUseSquareFeet	502,260.00	502,264.00
tblLandUse	LandUseSquareFeet	690,426.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.12
tblTripsAndVMT	HaulingTripLength	20.00	0.27

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.3994	86.1215	31.8824	0.1023	39.6859	2.2980	41.9839	6.7937	2.1152	8.9089	0.0000	10,398.5665	10,398.5665	2.5181	0.0000	10,461.5194
Maximum	**5.3994**	**86.1215**	**31.8824**	**0.1023**	**39.6859**	**2.2980**	**41.9839**	**6.7937**	**2.1152**	**8.9089**	**0.0000**	**10,398.5665**	**10,398.5665**	**2.5181**	**0.0000**	**10,461.5194**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.3994	86.1215	31.8824	0.1023	22.8044	2.2980	25.1024	3.5722	2.1152	5.6875	0.0000	10,398.5665	10,398.5665	2.5181	0.0000	10,461.5194
Maximum	**5.3994**	**86.1215**	**31.8824**	**0.1023**	**22.8044**	**2.2980**	**25.1024**	**3.5722**	**2.1152**	**5.6875**	**0.0000**	**10,398.5665**	**10,398.5665**	**2.5181**	**0.0000**	**10,461.5194**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	42.54	0.00	40.21	47.42	0.00	36.16	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/1/2019	5/31/2019	5	86	
2	Grading-Haul Import	Grading	2/1/2019	5/31/2019	5	86	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 215

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading-Haul Import	Excavators	0	8.00	158	0.38
Grading-Haul Import	Graders	0	8.00	187	0.41

Grading-Haul Import	Rubber Tired Dozers	0	8.00	247	0.40
Grading-Haul Import	Scrapers	0	8.00	367	0.48
Grading-Haul Import	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	18.00	0.00	7,500.00	15.00	9.00	0.12	LD_Mix	HDT_Mix	HHDT
Grading-Haul Import	0	0.00	0.00	17,500.00	15.00	9.00	0.27	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0155	0.0000	9.0155	3.6483	0.0000	3.6483			0.0000			0.0000
Off-Road	4.6037	53.7898	27.7383	0.0570		2.2684	2.2684		2.0869	2.0869		5,640.8577	5,640.8577	1.7847		5,685.4754
Total	**4.6037**	**53.7898**	**27.7383**	**0.0570**	**9.0155**	**2.2684**	**11.2838**	**3.6483**	**2.0869**	**5.7352**		**5,640.8577**	**5,640.8577**	**1.7847**		**5,685.4754**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2067	9.5983	1.0036	0.0126	0.9347	7.9900e-003	0.9427	0.0953	7.6400e-003	0.1029		1,328.3086	1,328.3086	0.2178		1,333.7546
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0967	0.0618	0.7431	2.2200e-003	24.0358	1.3700e-003	24.0372	2.4309	1.2600e-003	2.4321		220.9589	220.9589	5.9700e-003		221.1081
Total	**0.3034**	**9.6601**	**1.7467**	**0.0149**	**24.9705**	**9.3600e-003**	**24.9798**	**2.5262**	**8.9000e-003**	**2.5351**		**1,549.2675**	**1,549.2675**	**0.2238**		**1,554.8626**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.0570	0.0000	4.0570	1.6417	0.0000	1.6417			0.0000			0.0000
Off-Road	4.6037	53.7898	27.7383	0.0570		2.2684	2.2684		2.0869	2.0869	0.0000	5,640.8577	5,640.8577	1.7847		5,685.4754
Total	**4.6037**	**53.7898**	**27.7383**	**0.0570**	**4.0570**	**2.2684**	**6.3253**	**1.6417**	**2.0869**	**3.7286**	**0.0000**	**5,640.8577**	**5,640.8577**	**1.7847**		**5,685.4754**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2067	9.5983	1.0036	0.0126	0.5764	7.9900e-003	0.5844	0.0595	7.6400e-003	0.0671		1,328.3086	1,328.3086	0.2178		1,333.7546
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0967	0.0618	0.7431	2.2200e-003	14.7913	1.3700e-003	14.7927	1.5064	1.2600e-003	1.5077		220.9589	220.9589	5.9700e-003		221.1081
Total	**0.3034**	**9.6601**	**1.7467**	**0.0149**	**15.3677**	**9.3600e-003**	**15.3771**	**1.5659**	**8.9000e-003**	**1.5748**		**1,549.2675**	**1,549.2675**	**0.2238**		**1,554.8626**

3.3 Grading-Haul Import - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7983	0.0000	0.7983	0.1209	0.0000	0.1209			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.7983**	**0.0000**	**0.7983**	**0.1209**	**0.0000**	**0.1209**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4923	22.6715	2.3973	0.0305	4.9016	0.0203	4.9219	0.4983	0.0194	0.5178		3,208.4413	3,208.4413	0.5096		3,221.1814
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4923**	**22.6715**	**2.3973**	**0.0305**	**4.9016**	**0.0203**	**4.9219**	**0.4983**	**0.0194**	**0.5178**		**3,208.4413**	**3,208.4413**	**0.5096**		**3,221.1814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3592	0.0000	0.3592	0.0544	0.0000	0.0544			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.3592**	**0.0000**	**0.3592**	**0.0544**	**0.0000**	**0.0544**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4923	22.6715	2.3973	0.0305	3.0205	0.0203	3.0408	0.3102	0.0194	0.3296		3,208.4413	3,208.4413	0.5096		3,221.1814
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4923**	**22.6715**	**2.3973**	**0.0305**	**3.0205**	**0.0203**	**3.0408**	**0.3102**	**0.0194**	**0.3296**		**3,208.4413**	**3,208.4413**	**0.5096**		**3,221.1814**

Construction With EIR Mit

Solano-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	0.00	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Based on information provided by the Applicant.

Off-road Equipment -

Off-road Equipment - Based on information provided.

Off-road Equipment - Placeholder for import hauling only.

Trips and VMT - Based on information provided by the Applicant.

Grading - .

Architectural Coating - Per Applicant.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	NumDays	45.00	86.00
tblConstructionPhase	PhaseEndDate	4/4/2019	5/31/2019
tblConstructionPhase	PhaseEndDate	6/6/2019	5/31/2019
tblConstructionPhase	PhaseStartDate	4/5/2019	2/1/2019
tblGrading	MaterialExported	0.00	60,000.00
tblGrading	MaterialImported	0.00	140,000.00
tblLandUse	LandUseSquareFeet	502,260.00	502,264.00
tblLandUse	LandUseSquareFeet	690,426.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.12
tblTripsAndVMT	HaulingTripLength	20.00	0.27

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.4982	84.8702	33.6703	0.0969	39.6859	2.3059	41.9918	6.7937	2.1228	8.9164	0.0000	9,826.4371	9,826.4371	2.6211	0.0000	9,891.9657
Maximum	**5.4982**	**84.8702**	**33.6703**	**0.0969**	**39.6859**	**2.3059**	**41.9918**	**6.7937**	**2.1228**	**8.9164**	**0.0000**	**9,826.4371**	**9,826.4371**	**2.6211**	**0.0000**	**9,891.9657**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.4982	84.8702	33.6703	0.0969	22.8044	2.3059	25.1103	3.5722	2.1228	5.6950	0.0000	9,826.4371	9,826.4371	2.6211	0.0000	9,891.9657
Maximum	**5.4982**	**84.8702**	**33.6703**	**0.0969**	**22.8044**	**2.3059**	**25.1103**	**3.5722**	**2.1228**	**5.6950**	**0.0000**	**9,826.4371**	**9,826.4371**	**2.6211**	**0.0000**	**9,891.9657**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**42.54**	**0.00**	**40.20**	**47.42**	**0.00**	**36.13**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	2/1/2019	5/31/2019	5	86	
2	Grading-Haul Import	Grading	2/1/2019	5/31/2019	5	86	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 215

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	0	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading-Haul Import	Excavators	0	8.00	158	0.38
Grading-Haul Import	Graders	0	8.00	187	0.41
Grading-Haul Import	Rubber Tired Dozers	0	8.00	247	0.40
Grading-Haul Import	Scrapers	0	8.00	367	0.48
Grading-Haul Import	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	7	18.00	0.00	7,500.00	15.00	9.00	0.12	LD_Mix	HDT_Mix	HHDT
Grading-Haul Import	0	0.00	0.00	17,500.00	15.00	9.00	0.27	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0155	0.0000	9.0155	3.6483	0.0000	3.6483			0.0000			0.0000
Off-Road	4.6037	53.7898	27.7383	0.0570		2.2684	2.2684		2.0869	2.0869		5,640.8577	5,640.8577	1.7847		5,685.4754
Total	**4.6037**	**53.7898**	**27.7383**	**0.0570**	**9.0155**	**2.2684**	**11.2838**	**3.6483**	**2.0869**	**5.7352**		**5,640.8577**	**5,640.8577**	**1.7847**		**5,685.4754**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2349	9.2122	1.5593	0.0111	0.9347	0.0104	0.9450	0.0953	9.9100e-003	0.1052		1,162.8188	1,162.8188	0.2489		1,169.0414
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1017	0.0782	0.6796	2.0100e-003	24.0358	1.3700e-003	24.0372	2.4309	1.2600e-003	2.4321		200.4621	200.4621	5.4600e-003		200.5986
Total	**0.3366**	**9.2904**	**2.2389**	**0.0131**	**24.9705**	**0.0117**	**24.9822**	**2.5262**	**0.0112**	**2.5373**		**1,363.2809**	**1,363.2809**	**0.2544**		**1,369.6399**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.0570	0.0000	4.0570	1.6417	0.0000	1.6417			0.0000			0.0000
Off-Road	4.6037	53.7898	27.7383	0.0570		2.2684	2.2684		2.0869	2.0869	0.0000	5,640.8577	5,640.8577	1.7847		5,685.4754
Total	**4.6037**	**53.7898**	**27.7383**	**0.0570**	**4.0570**	**2.2684**	**6.3253**	**1.6417**	**2.0869**	**3.7286**	**0.0000**	**5,640.8577**	**5,640.8577**	**1.7847**		**5,685.4754**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2349	9.2122	1.5593	0.0111	0.5764	0.0104	0.5867	0.0595	9.9100e-003	0.0694		1,162.8188	1,162.8188	0.2489		1,169.0414
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1017	0.0782	0.6796	2.0100e-003	14.7913	1.3700e-003	14.7927	1.5064	1.2600e-003	1.5077		200.4621	200.4621	5.4600e-003		200.5986
Total	**0.3366**	**9.2904**	**2.2389**	**0.0131**	**15.3677**	**0.0117**	**15.3794**	**1.5659**	**0.0112**	**1.5771**		**1,363.2809**	**1,363.2809**	**0.2544**		**1,369.6399**

3.3 Grading-Haul Import - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7983	0.0000	0.7983	0.1209	0.0000	0.1209			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.7983**	**0.0000**	**0.7983**	**0.1209**	**0.0000**	**0.1209**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5579	21.7900	3.6930	0.0269	4.9016	0.0258	4.9275	0.4983	0.0247	0.5230		2,822.2985	2,822.2985	0.5821		2,836.8504
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.5579**	**21.7900**	**3.6930**	**0.0269**	**4.9016**	**0.0258**	**4.9275**	**0.4983**	**0.0247**	**0.5230**		**2,822.2985**	**2,822.2985**	**0.5821**		**2,836.8504**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3592	0.0000	0.3592	0.0544	0.0000	0.0544			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.3592**	**0.0000**	**0.3592**	**0.0544**	**0.0000**	**0.0544**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5579	21.7900	3.6930	0.0269	3.0205	0.0258	3.0463	0.3102	0.0247	0.3349		2,822.2985	2,822.2985	0.5821		2,836.8504
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.5579**	**21.7900**	**3.6930**	**0.0269**	**3.0205**	**0.0258**	**3.0463**	**0.3102**	**0.0247**	**0.3349**		**2,822.2985**	**2,822.2985**	**0.5821**		**2,836.8504**

Construction With EIR Mit

Solano-Sacramento County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading-Haul Import	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Excavators	Diesel	No Change	0	0	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	1	No Change	0.00
Rubber Tired Loaders	Diesel	No Change	0	1	No Change	0.00
Scrapers	Diesel	No Change	0	2	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	0	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Graders	2.09300E-002	2.82920E-001	7.90400E-002	2.90000E-004	9.08000E-003	8.35000E-003	0.00000E+000	2.56533E+001	2.56533E+001	8.12000E-003	0.00000E+000	2.58563E+001

Rollers	1.94800E-002	1.92720E-001	1.64030E-001	2.30000E-004	1.26700E-002	1.16600E-002	0.00000E+000	2.02600E+001	2.02600E+001	6.41000E-003	0.00000E+000	2.04202E+001
Rubber Tired Dozers	4.87900E-002	5.19200E-001	1.84220E-001	3.70000E-004	2.53200E-002	2.32900E-002	0.00000E+000	3.29793E+001	3.29793E+001	1.04300E-002	0.00000E+000	3.32401E+001
Rubber Tired Loaders	1.71500E-002	2.07530E-001	7.21900E-002	2.70000E-004	6.96000E-003	6.40000E-003	0.00000E+000	2.41390E+001	2.41390E+001	7.64000E-003	0.00000E+000	2.43299E+001
Scrapers	9.16100E-002	1.11059E+000	6.93280E-001	1.30000E-003	4.35200E-002	4.00300E-002	0.00000E+000	1.17012E+002	1.17012E+002	3.70200E-002	0.00000E+000	1.17938E+002
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Graders	2.09300E-002	2.82920E-001	7.90400E-002	2.90000E-004	9.08000E-003	8.35000E-003	0.00000E+000	2.56533E+001	2.56533E+001	8.12000E-003	0.00000E+000	2.58562E+001
Rollers	1.94800E-002	1.92720E-001	1.64030E-001	2.30000E-004	1.26700E-002	1.16600E-002	0.00000E+000	2.02600E+001	2.02600E+001	6.41000E-003	0.00000E+000	2.04202E+001
Rubber Tired Dozers	4.87900E-002	5.19200E-001	1.84220E-001	3.70000E-004	2.53200E-002	2.32900E-002	0.00000E+000	3.29792E+001	3.29792E+001	1.04300E-002	0.00000E+000	3.32401E+001
Rubber Tired Loaders	1.71500E-002	2.07530E-001	7.21900E-002	2.70000E-004	6.96000E-003	6.40000E-003	0.00000E+000	2.41389E+001	2.41389E+001	7.64000E-003	0.00000E+000	2.43299E+001
Scrapers	9.16100E-002	1.11059E+000	6.93280E-001	1.30000E-003	4.35200E-002	4.00300E-002	0.00000E+000	1.17012E+002	1.17012E+002	3.70200E-002	0.00000E+000	1.17938E+002
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Percent Reduction											
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.16944E-006	1.16944E-006	0.00000E+000	0.00000E+000	1.16026E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.48075E-006	1.48075E-006	0.00000E+000	0.00000E+000	9.79421E-007
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.21288E-006	1.21288E-006	0.00000E+000	0.00000E+000	1.20336E-006
Rubber Tired Loaders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.24280E-006	1.24280E-006	0.00000E+000	0.00000E+000	8.22034E-007
Scrapers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19645E-006	1.19645E-006	0.00000E+000	0.00000E+000	1.18707E-006
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	15.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grading	Fugitive Dust	0.39	0.16	0.17	0.07	0.55	0.55
Grading	Roads	0.91	0.09	0.56	0.06	0.38	0.38
Grading-Haul Import	Fugitive Dust	0.03	0.01	0.02	0.00	0.55	0.55
Grading-Haul Import	Roads	0.18	0.02	0.11	0.01	0.38	0.38

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Appendix C – Proposed Project: CalEEMod Operation

Operation - Project

Solano-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	0.00	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Operation only.

Off-road Equipment - Operational use

Vehicle Trips - See AQ/GHG appendix for details.

Road Dust - Assumes project related vehicle trips would travel on paved roadways.

Water And Wastewater - See AQ/GHG appendix for details.

Construction Off-road Equipment Mitigation - Assumes forklifts to be alternative fueled.

Water Mitigation -

Fleet Mix - Based on information compiled by PlaceWorks. See AQ/GHG appendix for details.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	45.00
tblConstructionPhase	NumDays	30.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	2/25/2019	12/31/2020
tblConstructionPhase	PhaseStartDate	1/15/2019	1/1/2020
tblFleetMix	HHD	0.04	0.00
tblFleetMix	LDA	0.58	0.62
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.5880e-003	0.00
tblFleetMix	MCY	6.8120e-003	7.8400e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	1.1190e-003	0.00
tblFleetMix	MHD	9.5090e-003	0.00
tblFleetMix	OBUS	3.2130e-003	0.00
tblFleetMix	SBUS	6.0800e-004	0.00
tblFleetMix	UBUS	2.3430e-003	0.00

tblLandUse	LandUseSquareFeet	502,260.00	502,264.00
tblLandUse	LandUseSquareFeet	690,426.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	WorkerTripNumber	63.00	113.00
tblVehicleTrips	ST_TR	1.68	0.98
tblVehicleTrips	SU_TR	1.68	0.98
tblVehicleTrips	WD_TR	1.68	0.98
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	OutdoorWaterUseRate	0.00	2,122,436.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	1.7434	14.9108	14.1794	0.0197	23.4035	1.1071	24.5106	2.3715	1.0186	3.3901	0.0000	1,741.7604	1,741.7604	0.5018	0.0000	1,754.3042
Maximum	**1.7434**	**14.9108**	**14.1794**	**0.0197**	**23.4035**	**1.1071**	**24.5106**	**2.3715**	**1.0186**	**3.3901**	**0.0000**	**1,741.7604**	**1,741.7604**	**0.5018**	**0.0000**	**1,754.3042**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	-0.8005	7.9427	186.6142	0.0197	23.4035	-0.4990	22.9045	2.3715	-0.4284	1.9431	0.0000	2,588.4644	2,588.4644	0.7756	0.0000	2,607.8543
Maximum	**-0.8005**	**7.9427**	**186.6142**	**0.0197**	**23.4035**	**-0.4990**	**22.9045**	**2.3715**	**-0.4284**	**1.9431**	**0.0000**	**2,588.4644**	**2,588.4644**	**0.7756**	**0.0000**	**2,607.8543**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**145.92**	**46.73**	**-1,216.09**	**0.00**	**0.00**	**145.07**	**6.55**	**0.00**	**142.06**	**42.68**	**0.00**	**-48.61**	**-48.61**	**-54.58**	**0.00**	**-48.65**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
4	**10-15-2019**	**1-14-2020**	0.6378	0.2739
5	**1-15-2020**	**4-14-2020**	4.1448	1.7798
6	**4-15-2020**	**7-14-2020**	4.1402	1.7752
7	**7-15-2020**	**9-30-2020**	3.5487	1.5216
		Highest	4.1448	1.7798

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3267	6.0000e-005	6.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0125	0.0125	3.0000e-005	0.0000	0.0133
Energy	0.0103	0.0933	0.0784	5.6000e-004		7.0900e-003	7.0900e-003		7.0900e-003	7.0900e-003	0.0000	1,544.3974	1,544.3974	0.0672	0.0154	1,550.6545
Mobile	0.1910	0.3623	2.6379	8.0900e-003	0.7711	5.9000e-003	0.7770	0.2052	5.4800e-003	0.2107	0.0000	732.3766	732.3766	0.0243	0.0000	732.9830
Waste						0.0000	0.0000		0.0000	0.0000	95.8361	0.0000	95.8361	5.6638	0.0000	237.4299
Water						0.0000	0.0000		0.0000	0.0000	41.0932	184.9916	226.0848	0.1498	0.0911	256.9762
Total	**2.5280**	**0.4557**	**2.7227**	**8.6500e-003**	**0.7711**	**0.0130**	**0.7841**	**0.2052**	**0.0126**	**0.2178**	**136.9293**	**2,461.7780**	**2,598.7073**	**5.9050**	**0.1065**	**2,778.0567**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3267	6.0000e-005	6.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0125	0.0125	3.0000e-005	0.0000	0.0133
Energy	0.0103	0.0933	0.0784	5.6000e-004		7.0900e-003	7.0900e-003		7.0900e-003	7.0900e-003	0.0000	1,544.3974	1,544.3974	0.0672	0.0154	1,550.6545
Mobile	0.1910	0.3623	2.6379	8.0900e-003	0.7711	5.9000e-003	0.7770	0.2052	5.4800e-003	0.2107	0.0000	732.3766	732.3766	0.0243	0.0000	732.9830

Waste						0.0000	0.0000		0.0000	0.0000	95.8361	0.0000	95.8361	5.6638	0.0000	237.4299
Water						0.0000	0.0000		0.0000	0.0000	32.8746	148.2936	181.1682	0.1199	0.0729	205.8825
Total	**2.5280**	**0.4557**	**2.7227**	**8.6500e-003**	**0.7711**	**0.0130**	**0.7841**	**0.2052**	**0.0126**	**0.2178**	**128.7107**	**2,425.0801**	**2,553.7907**	**5.8751**	**0.0882**	**2,726.9631**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.00**	**1.49**	**1.73**	**0.51**	**17.11**	**1.84**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	12/31/2020	7	366	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Forklifts	25	20.00	89	0.20
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	25	113.00	0.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6471	14.8402	13.4993	0.0175		1.1056	1.1056		1.0172	1.0172	0.0000	1,535.9569	1,535.9569	0.4968	0.0000	1,548.3759
Total	**1.6471**	**14.8402**	**13.4993**	**0.0175**		**1.1056**	**1.1056**		**1.0172**	**1.0172**	**0.0000**	**1,535.9569**	**1,535.9569**	**0.4968**	**0.0000**	**1,548.3759**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0963	0.0706	0.6802	2.2800e-003	23.4035	1.5400e-003	23.4050	2.3715	1.4200e-003	2.3729	0.0000	205.8035	205.8035	4.9900e-003	0.0000	205.9283
Total	**0.0963**	**0.0706**	**0.6802**	**2.2800e-003**	**23.4035**	**1.5400e-003**	**23.4050**	**2.3715**	**1.4200e-003**	**2.3729**	**0.0000**	**205.8035**	**205.8035**	**4.9900e-003**	**0.0000**	**205.9283**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	-0.8968	7.8721	185.9341	0.0175		-0.5006	-0.5006		-0.4298	-0.4298	0.0000	2,382.6610	2,382.6610	0.7706	0.0000	2,401.9260
Total	**-0.8968**	**7.8721**	**185.9341**	**0.0175**		**-0.5006**	**-0.5006**		**-0.4298**	**-0.4298**	**0.0000**	**2,382.6610**	**2,382.6610**	**0.7706**	**0.0000**	**2,401.9260**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0963	0.0706	0.6802	2.2800e-003	23.4035	1.5400e-003	23.4050	2.3715	1.4200e-003	2.3729	0.0000	205.8035	205.8035	4.9900e-003	0.0000	205.9283
Total	**0.0963**	**0.0706**	**0.6802**	**2.2800e-003**	**23.4035**	**1.5400e-003**	**23.4050**	**2.3715**	**1.4200e-003**	**2.3729**	**0.0000**	**205.8035**	**205.8035**	**4.9900e-003**	**0.0000**	**205.9283**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1910	0.3623	2.6379	8.0900e-003	0.7711	5.9000e-003	0.7770	0.2052	5.4800e-003	0.2107	0.0000	732.3766	732.3766	0.0243	0.0000	732.9830
Unmitigated	0.1910	0.3623	2.6379	8.0900e-003	0.7711	5.9000e-003	0.7770	0.2052	5.4800e-003	0.2107	0.0000	732.3766	732.3766	0.0243	0.0000	732.9830

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	492.21	492.21	492.21	2,095,626	2,095,626
Total	492.21	492.21	492.21	2,095,626	2,095,626

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	15.00	8.00	9.00	0.00	0.00	0.00	0	0	0
Parking Lot	15.00	8.00	9.00	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No Rail	15.00	8.00	9.00	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Parking Lot	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Refrigerated Warehouse-No Rail	0.619373	0.040285	0.187014	0.124150	0.021893	0.000000	0.000000	0.000000	0.000000	0.000000	0.007840	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,442.8151	1,442.8151	0.0652	0.0135	1,448.4685
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,442.8151	1,442.8151	0.0652	0.0135	1,448.4685
NaturalGas Mitigated	0.0103	0.0933	0.0784	5.6000e-004		7.0900e-003	7.0900e-003		7.0900e-003	7.0900e-003	0.0000	101.5823	101.5823	1.9500e-003	1.8600e-003	102.1860
NaturalGas Unmitigated	0.0103	0.0933	0.0784	5.6000e-004		7.0900e-003	7.0900e-003		7.0900e-003	7.0900e-003	0.0000	101.5823	101.5823	1.9500e-003	1.8600e-003	102.1860

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	1.90358e+006	0.0103	0.0933	0.0784	5.6000e-004		7.0900e-003	7.0900e-003		7.0900e-003	7.0900e-003	0.0000	101.5823	101.5823	1.9500e-003	1.8600e-003	102.1860
Total		**0.0103**	**0.0933**	**0.0784**	**5.6000e-004**		**7.0900e-003**	**7.0900e-003**		**7.0900e-003**	**7.0900e-003**	**0.0000**	**101.5823**	**101.5823**	**1.9500e-003**	**1.8600e-003**	**102.1860**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	1.90358e+006	0.0103	0.0933	0.0784	5.6000e-004		7.0900e-003	7.0900e-003		7.0900e-003	7.0900e-003	0.0000	101.5823	101.5823	1.9500e-003	1.8600e-003	102.1860
Total		**0.0103**	**0.0933**	**0.0784**	**5.6000e-004**		**7.0900e-003**	**7.0900e-003**		**7.0900e-003**	**7.0900e-003**	**0.0000**	**101.5823**	**101.5823**	**1.9500e-003**	**1.8600e-003**	**102.1860**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	62562.5	18.2002	8.2000e-004	1.7000e-004	18.2715
Refrigerated Warehouse-No Rail	4.89707e+006	1,424.6150	0.0644	0.0133	1,430.1970
Total		**1,442.8151**	**0.0652**	**0.0135**	**1,448.4685**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	62562.5	18.2002	8.2000e-004	1.7000e-004	18.2715
Refrigerated Warehouse-No Rail	4.89707e+006	1,424.6150	0.0644	0.0133	1,430.1970
Total		**1,442.8151**	**0.0652**	**0.0135**	**1,448.4685**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3267	6.0000e-005	6.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0125	0.0125	3.0000e-005	0.0000	0.0133
Unmitigated	2.3267	6.0000e-005	6.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0125	0.0125	3.0000e-005	0.0000	0.0133

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9732					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.1000e-004	6.0000e-005	6.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0125	0.0125	3.0000e-005	0.0000	0.0133
Total	**2.3267**	**6.0000e-005**	**6.4400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0125**	**0.0125**	**3.0000e-005**	**0.0000**	**0.0133**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3529					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.9732					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.1000e-004	6.0000e-005	6.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0125	0.0125	3.0000e-005	0.0000	0.0133
Total	**2.3267**	**6.0000e-005**	**6.4400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0125**	**0.0125**	**3.0000e-005**	**0.0000**	**0.0133**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	181.1682	0.1199	0.0729	205.8825
Unmitigated	226.0848	0.1498	0.0911	256.9762

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	116.148 / 2.12244	226.0848	0.1498	0.0911	256.9762
Total		**226.0848**	**0.1498**	**0.0911**	**256.9762**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	92.9181 / 1.99297	181.1682	0.1199	0.0729	205.8825
Total		**181.1682**	**0.1199**	**0.0729**	**205.8825**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	95.8361	5.6638	0.0000	237.4299
Unmitigated	95.8361	5.6638	0.0000	237.4299

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	472.12	95.8361	5.6638	0.0000	237.4299
Total		**95.8361**	**5.6638**	**0.0000**	**237.4299**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	472.12	95.8361	5.6638	0.0000	237.4299
Total		**95.8361**	**5.6638**	**0.0000**	**237.4299**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation - Project

Solano-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	0.00	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Operation only.

Off-road Equipment - Operational use

Vehicle Trips - See AQ/GHG appendix for details.

Road Dust - Assumes project related vehicle trips would travel on paved roadways.

Water And Wastewater - See AQ/GHG appendix for details.

Construction Off-road Equipment Mitigation - Assumes forklifts to be alternative fueled.

Water Mitigation -

Fleet Mix - Based on information compiled by PlaceWorks. See AQ/GHG appendix for details.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	45.00
tblConstructionPhase	NumDays	30.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	2/25/2019	12/31/2020
tblConstructionPhase	PhaseStartDate	1/15/2019	1/1/2020
tblFleetMix	HHD	0.04	0.00
tblFleetMix	LDA	0.58	0.62
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.5880e-003	0.00
tblFleetMix	MCY	6.8120e-003	7.8400e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	1.1190e-003	0.00
tblFleetMix	MHD	9.5090e-003	0.00
tblFleetMix	OBUS	3.2130e-003	0.00
tblFleetMix	SBUS	6.0800e-004	0.00
tblFleetMix	UBUS	2.3430e-003	0.00
tblLandUse	LandUseSquareFeet	502,260.00	502,264.00

tblLandUse	LandUseSquareFeet	690,426.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	WorkerTripNumber	63.00	113.00
tblVehicleTrips	ST_TR	1.68	0.98
tblVehicleTrips	SU_TR	1.68	0.98
tblVehicleTrips	WD_TR	1.68	0.98
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	OutdoorWaterUseRate	0.00	2,122,436.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	9.5561	81.4370	77.9491	0.1089	150.8913	6.0499	156.9412	15.2604	5.5659	20.8264	0.0000	10,595.0317	10,595.0317	3.0251	0.0000	10,670.6599
Maximum	**9.5561**	**81.4370**	**77.9491**	**0.1089**	**150.8913**	**6.0499**	**156.9412**	**15.2604**	**5.5659**	**20.8264**	**0.0000**	**10,595.0317**	**10,595.0317**	**3.0251**	**0.0000**	**10,670.6599**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	43.3601	1,020.2171	0.1089	150.8913	-2.7269	148.1644	15.2604	-2.3409	12.9196	0.0000	15,695.2208	15,695.2208	4.6746	0.0000	15,812.0867
Maximum	**0.0000**	**43.3601**	**1,020.2171**	**0.1089**	**150.8913**	**-2.7269**	**148.1644**	**15.2604**	**-2.3409**	**12.9196**	**0.0000**	**15,695.2208**	**15,695.2208**	**4.6746**	**0.0000**	**15,812.0867**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**100.00**	**46.76**	**-1,208.82**	**0.00**	**0.00**	**145.07**	**5.59**	**0.00**	**142.06**	**37.97**	**0.00**	**-48.14**	**-48.14**	**-54.53**	**0.00**	**-48.18**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.7524	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Energy	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095
Mobile	1.2096	1.8081	15.7545	0.0481	4.3829	0.0325	4.4154	1.1633	0.0301	1.1934		4,793.0438	4,793.0438	0.1535		4,796.8809
Total	**14.0182**	**2.3200**	**16.2556**	**0.0511**	**4.3829**	**0.0716**	**4.4545**	**1.1633**	**0.0693**	**1.2325**		**5,406.7597**	**5,406.7597**	**0.1657**	**0.0113**	**5,414.2531**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.7524	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Energy	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095
Mobile	1.2096	1.8081	15.7545	0.0481	4.3829	0.0325	4.4154	1.1633	0.0301	1.1934		4,793.0438	4,793.0438	0.1535		4,796.8809
Total	**14.0182**	**2.3200**	**16.2556**	**0.0511**	**4.3829**	**0.0716**	**4.4545**	**1.1633**	**0.0693**	**1.2325**		**5,406.7597**	**5,406.7597**	**0.1657**	**0.0113**	**5,414.2531**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	12/31/2020	7	366	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Forklifts	25	20.00	89	0.20
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	25	113.00	0.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.0007	81.0939	73.7665	0.0955		6.0415	6.0415		5.5582	5.5582		9,251.9269	9,251.9269	2.9923		9,326.7334
Total	**9.0007**	**81.0939**	**73.7665**	**0.0955**		**6.0415**	**6.0415**		**5.5582**	**5.5582**		**9,251.9269**	**9,251.9269**	**2.9923**		**9,326.7334**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5553	0.3431	4.1826	0.0135	150.8913	8.4100e-003	150.8997	15.2604	7.7500e-003	15.2682		1,343.1048	1,343.1048	0.0329		1,343.9265
Total	**0.5553**	**0.3431**	**4.1826**	**0.0135**	**150.8913**	**8.4100e-003**	**150.8997**	**15.2604**	**7.7500e-003**	**15.2682**		**1,343.1048**	**1,343.1048**	**0.0329**		**1,343.9265**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	-4.9007	43.0170	1,016.0345	0.0955		-2.7353	-2.7353		-2.3486	-2.3486	0.0000	14,352.1160	14,352.1160	4.6418		14,468.1602
Total	**-4.9007**	**43.0170**	**1,016.0345**	**0.0955**		**-2.7353**	**-2.7353**		**-2.3486**	**-2.3486**	**0.0000**	**14,352.1160**	**14,352.1160**	**4.6418**		**14,468.1602**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5553	0.3431	4.1826	0.0135	150.8913	8.4100e-003	150.8997	15.2604	7.7500e-003	15.2682		1,343.1048	1,343.1048	0.0329		1,343.9265
Total	**0.5553**	**0.3431**	**4.1826**	**0.0135**	**150.8913**	**8.4100e-003**	**150.8997**	**15.2604**	**7.7500e-003**	**15.2682**		**1,343.1048**	**1,343.1048**	**0.0329**		**1,343.9265**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2096	1.8081	15.7545	0.0481	4.3829	0.0325	4.4154	1.1633	0.0301	1.1934		4,793.0438	4,793.0438	0.1535		4,796.8809
Unmitigated	1.2096	1.8081	15.7545	0.0481	4.3829	0.0325	4.4154	1.1633	0.0301	1.1934		4,793.0438	4,793.0438	0.1535		4,796.8809

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	492.21	492.21	492.21	2,095,626	2,095,626
Total	492.21	492.21	492.21	2,095,626	2,095,626

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	15.00	8.00	9.00	0.00	0.00	0.00	0	0	0
Parking Lot	15.00	8.00	9.00	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No Rail	15.00	8.00	9.00	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Parking Lot	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Refrigerated Warehouse-No Rail	0.619373	0.040285	0.187014	0.124150	0.021893	0.000000	0.000000	0.000000	0.000000	0.000000	0.007840	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095
NaturalGas Unmitigated	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	5215.29	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095
Total		**0.0562**	**0.5113**	**0.4295**	**3.0700e-003**		**0.0389**	**0.0389**		**0.0389**	**0.0389**		**613.5634**	**613.5634**	**0.0118**	**0.0113**	**617.2095**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	5.21529	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095
Total		**0.0562**	**0.5113**	**0.4295**	**3.0700e-003**		**0.0389**	**0.0389**		**0.0389**	**0.0389**		**613.5634**	**613.5634**	**0.0118**	**0.0113**	**617.2095**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	12.7524	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Unmitigated	12.7524	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.8118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.7400e-003	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Total	**12.7524**	**6.6000e-004**	**0.0716**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**		**0.1525**	**0.1525**	**4.1000e-004**		**0.1627**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.8118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.7400e-003	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Total	**12.7524**	**6.6000e-004**	**0.0716**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**		**0.1525**	**0.1525**	**4.1000e-004**		**0.1627**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation - Project

Solano-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	0.00	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Operation only.

Off-road Equipment - Operational use

Vehicle Trips - See AQ/GHG appendix for details.

Road Dust - Assumes project related vehicle trips would travel on paved roadways.

Water And Wastewater - See AQ/GHG appendix for details.

Construction Off-road Equipment Mitigation - Assumes forklifts to be alternative fueled.

Water Mitigation -

Fleet Mix - Based on information compiled by PlaceWorks. See AQ/GHG appendix for details.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	45.00
tblConstructionPhase	NumDays	30.00	366.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	2/25/2019	12/31/2020
tblConstructionPhase	PhaseStartDate	1/15/2019	1/1/2020
tblFleetMix	HHD	0.04	0.00
tblFleetMix	LDA	0.58	0.62
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.5880e-003	0.00
tblFleetMix	MCY	6.8120e-003	7.8400e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	1.1190e-003	0.00
tblFleetMix	MHD	9.5090e-003	0.00
tblFleetMix	OBUS	3.2130e-003	0.00
tblFleetMix	SBUS	6.0800e-004	0.00
tblFleetMix	UBUS	2.3430e-003	0.00
tblLandUse	LandUseSquareFeet	502,260.00	502,264.00

tblLandUse	LandUseSquareFeet	690,426.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblTripsAndVMT	WorkerTripNumber	63.00	113.00
tblVehicleTrips	ST_TR	1.68	0.98
tblVehicleTrips	SU_TR	1.68	0.98
tblVehicleTrips	WD_TR	1.68	0.98
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	OutdoorWaterUseRate	0.00	2,122,436.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	9.5848	81.5277	77.5684	0.1077	150.8913	6.0499	156.9412	15.2604	5.5659	20.8264	0.0000	10,470.3600	10,470.3600	3.0221	0.0000	10,545.9131
Maximum	**9.5848**	**81.5277**	**77.5684**	**0.1077**	**150.8913**	**6.0499**	**156.9412**	**15.2604**	**5.5659**	**20.8264**	**0.0000**	**10,470.3600**	**10,470.3600**	**3.0221**	**0.0000**	**10,545.9131**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	43.4507	1,019.8364	0.1077	150.8913	-2.7269	148.1644	15.2604	-2.3409	12.9196	0.0000	15,570.5492	15,570.5492	4.6716	0.0000	15,687.3399
Maximum	**0.0000**	**43.4507**	**1,019.8364**	**0.1077**	**150.8913**	**-2.7269**	**148.1644**	**15.2604**	**-2.3409**	**12.9196**	**0.0000**	**15,570.5492**	**15,570.5492**	**4.6716**	**0.0000**	**15,687.3399**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**100.00**	**46.70**	**-1,214.76**	**0.00**	**0.00**	**145.07**	**5.59**	**0.00**	**142.06**	**37.97**	**0.00**	**-48.71**	**-48.71**	**-54.58**	**0.00**	**-48.75**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.7524	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Energy	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095
Mobile	1.0330	2.1729	15.1966	0.0438	4.3829	0.0325	4.4154	1.1633	0.0301	1.1934		4,368.7954	4,368.7954	0.1496		4,372.5347
Total	**13.8416**	**2.6849**	**15.6977**	**0.0469**	**4.3829**	**0.0716**	**4.4545**	**1.1633**	**0.0693**	**1.2325**		**4,982.5114**	**4,982.5114**	**0.1617**	**0.0113**	**4,989.9069**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	12.7524	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Energy	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095
Mobile	1.0330	2.1729	15.1966	0.0438	4.3829	0.0325	4.4154	1.1633	0.0301	1.1934		4,368.7954	4,368.7954	0.1496		4,372.5347
Total	**13.8416**	**2.6849**	**15.6977**	**0.0469**	**4.3829**	**0.0716**	**4.4545**	**1.1633**	**0.0693**	**1.2325**		**4,982.5114**	**4,982.5114**	**0.1617**	**0.0113**	**4,989.9069**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	12/31/2020	7	366	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Forklifts	25	20.00	89	0.20
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	25	113.00	0.00	0.00	15.00	9.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.0007	81.0939	73.7665	0.0955		6.0415	6.0415		5.5582	5.5582		9,251.9269	9,251.9269	2.9923		9,326.7334
Total	**9.0007**	**81.0939**	**73.7665**	**0.0955**		**6.0415**	**6.0415**		**5.5582**	**5.5582**		**9,251.9269**	**9,251.9269**	**2.9923**		**9,326.7334**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5841	0.4338	3.8019	0.0122	150.8913	8.4100e-003	150.8997	15.2604	7.7500e-003	15.2682		1,218.4331	1,218.4331	0.0299		1,219.1797
Total	**0.5841**	**0.4338**	**3.8019**	**0.0122**	**150.8913**	**8.4100e-003**	**150.8997**	**15.2604**	**7.7500e-003**	**15.2682**		**1,218.4331**	**1,218.4331**	**0.0299**		**1,219.1797**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	-4.9007	43.0170	1,016.0345	0.0955		-2.7353	-2.7353		-2.3486	-2.3486	0.0000	14,352.1160	14,352.1160	4.6418		14,468.1602
Total	**-4.9007**	**43.0170**	**1,016.0345**	**0.0955**		**-2.7353**	**-2.7353**		**-2.3486**	**-2.3486**	**0.0000**	**14,352.1160**	**14,352.1160**	**4.6418**		**14,468.1602**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5841	0.4338	3.8019	0.0122	150.8913	8.4100e-003	150.8997	15.2604	7.7500e-003	15.2682		1,218.4331	1,218.4331	0.0299		1,219.1797
Total	**0.5841**	**0.4338**	**3.8019**	**0.0122**	**150.8913**	**8.4100e-003**	**150.8997**	**15.2604**	**7.7500e-003**	**15.2682**		**1,218.4331**	**1,218.4331**	**0.0299**		**1,219.1797**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0330	2.1729	15.1966	0.0438	4.3829	0.0325	4.4154	1.1633	0.0301	1.1934		4,368.7954	4,368.7954	0.1496		4,372.5347
Unmitigated	1.0330	2.1729	15.1966	0.0438	4.3829	0.0325	4.4154	1.1633	0.0301	1.1934		4,368.7954	4,368.7954	0.1496		4,372.5347

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	492.21	492.21	492.21	2,095,626	2,095,626
Total	492.21	492.21	492.21	2,095,626	2,095,626

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	15.00	8.00	9.00	0.00	0.00	0.00	0	0	0
Parking Lot	15.00	8.00	9.00	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No Rail	15.00	8.00	9.00	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Parking Lot	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Refrigerated Warehouse-No Rail	0.619373	0.040285	0.187014	0.124150	0.021893	0.000000	0.000000	0.000000	0.000000	0.000000	0.007840	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095
NaturalGas Unmitigated	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	5215.29	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095
Total		**0.0562**	**0.5113**	**0.4295**	**3.0700e-003**		**0.0389**	**0.0389**		**0.0389**	**0.0389**		**613.5634**	**613.5634**	**0.0118**	**0.0113**	**617.2095**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	5.21529	0.0562	0.5113	0.4295	3.0700e-003		0.0389	0.0389		0.0389	0.0389		613.5634	613.5634	0.0118	0.0113	617.2095
Total		**0.0562**	**0.5113**	**0.4295**	**3.0700e-003**		**0.0389**	**0.0389**		**0.0389**	**0.0389**		**613.5634**	**613.5634**	**0.0118**	**0.0113**	**617.2095**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	12.7524	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Unmitigated	12.7524	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.8118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.7400e-003	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Total	**12.7524**	**6.6000e-004**	**0.0716**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**		**0.1525**	**0.1525**	**4.1000e-004**		**0.1627**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.9339					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	10.8118					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.7400e-003	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Total	**12.7524**	**6.6000e-004**	**0.0716**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**		**0.1525**	**0.1525**	**4.1000e-004**		**0.1627**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation - Project

Solano-Sacramento County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Demolition	1.46	0.47	-12.16	0.00	1.45	1.42	0.00	-0.49	-0.49	-0.55	0.00	-0.49

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Concrete/Industrial Saws	Diesel	No Change	0	0	No Change	0.00
Excavators	Diesel	No Change	0	0	No Change	0.00
Forklifts	CNG	No Change	45	25	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	0	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Forklifts	1.64713E+000	1.48402E+001	1.34993E+001	1.74700E-002	1.10559E+000	1.01715E+000	0.00000E+000	1.53596E+003	1.53596E+003	4.96760E-001	0.00000E+000	1.54838E+003
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Forklifts	-8.96820E-001	7.87209E+000	1.85934E+002	1.74700E-002	-5.00560E-001	-4.29800E-001	0.00000E+000	2.38266E+003	2.38266E+003	7.70600E-001	0.00000E+000	2.40193E+003
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Percent Reduction											
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Forklifts	1.54447E+000	4.69542E-001	-1.27736E+001	0.00000E+000	1.45275E+000	1.42255E+000	0.00000E+000	-5.51255E-001	-5.51255E-001	-5.51252E-001	0.00000E+000	-5.51255E-001
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Water Exposed Area	PM10 Reduction	0.00	PM2.5 Reduction	0.00	Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00

Demolition	Roads	23.40	2.37	23.40	2.37	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	19.84	19.87	19.99	19.99	19.88
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Valu
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.06	0.25		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services	
Percent Reduction in Waste Disposed	


e3

Project - Trucks

Solano-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	690,556.68	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Truck mobile emissions only

Vehicle Trips - See AQ/GHG appendix for details.

Fleet Mix - Truck emissions only.

Energy Use - Truck emissions only

Water And Wastewater - Truck emissions only

Road Dust - Assumes all project-related trucks travel on paved roadways.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	1.00
tblConstructionPhase	PhaseEndDate	2/25/2019	1/15/2019
tblEnergyUse	LightingElect	1.62	0.00
tblEnergyUse	NT24E	7.99	0.00
tblEnergyUse	NT24NG	3.06	0.00
tblEnergyUse	T24E	0.14	0.00
tblEnergyUse	T24NG	0.73	0.00
tblFleetMix	HHD	0.04	1.00
tblFleetMix	LDA	0.58	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5880e-003	0.00
tblFleetMix	MCY	6.8120e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.1190e-003	0.00
tblFleetMix	MHD	9.5090e-003	0.00
tblFleetMix	OBUS	3.2130e-003	0.00
tblFleetMix	SBUS	6.0800e-004	0.00
tblFleetMix	UBUS	2.3430e-003	0.00
tblRoadDust	RoadPercentPave	94	100

tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	10.00	60.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	0.42
tblVehicleTrips	SU_TR	1.68	0.42
tblVehicleTrips	WD_TR	1.68	0.42
tblWater	IndoorWaterUseRate	116,147,625.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3857	6.0000e-005	6.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0125	0.0125	3.0000e-005	0.0000	0.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	18.2002	18.2002	8.2000e-004	1.7000e-004	18.2715
Mobile	0.7765	23.9193	4.4925	0.0823	1.9615	0.1047	2.0661	0.5394	0.1001	0.6396	0.0000	7,856.8033	7,856.8033	0.1734	0.0000	7,861.1387
Waste						0.0000	0.0000		0.0000	0.0000	95.8361	0.0000	95.8361	5.6638	0.0000	237.4299
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.1622**	**23.9194**	**4.4990**	**0.0823**	**1.9615**	**0.1047**	**2.0662**	**0.5394**	**0.1002**	**0.6396**	**95.8361**	**7,875.0159**	**7,970.8520**	**5.8380**	**1.7000e-004**	**8,116.8533**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.3857	6.0000e-005	6.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0125	0.0125	3.0000e-005	0.0000	0.0133
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	18.2002	18.2002	8.2000e-004	1.7000e-004	18.2715
Mobile	0.7765	23.9193	4.4925	0.0823	1.9615	0.1047	2.0661	0.5394	0.1001	0.6396	0.0000	7,856.8033	7,856.8033	0.1734	0.0000	7,861.1387
Waste						0.0000	0.0000		0.0000	0.0000	95.8361	0.0000	95.8361	5.6638	0.0000	237.4299
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.1622**	**23.9194**	**4.4990**	**0.0823**	**1.9615**	**0.1047**	**2.0662**	**0.5394**	**0.1002**	**0.6396**	**95.8361**	**7,875.0159**	**7,970.8520**	**5.8380**	**1.7000e-004**	**8,116.8533**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/15/2019	1/15/2019	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7765	23.9193	4.4925	0.0823	1.9615	0.1047	2.0661	0.5394	0.1001	0.6396	0.0000	7,856.8033	7,856.8033	0.1734	0.0000	7,861.1387
Unmitigated	0.7765	23.9193	4.4925	0.0823	1.9615	0.1047	2.0661	0.5394	0.1001	0.6396	0.0000	7,856.8033	7,856.8033	0.1734	0.0000	7,861.1387

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	211.45	211.45	211.45	4,618,137	4,618,137
Total	211.45	211.45	211.45	4,618,137	4,618,137

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No Rail	60.00	5.00	7.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Parking Lot	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Refrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Project - Trucks

Solano-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	690,556.68	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Truck mobile emissions only

Vehicle Trips - See AQ/GHG appendix for details.

Fleet Mix - Truck emissions only.

Energy Use - Truck emissions only

Water And Wastewater - Truck emissions only

Road Dust - Assumes all project-related trucks travel on paved roadways.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	1.00
tblConstructionPhase	PhaseEndDate	2/25/2019	1/15/2019
tblEnergyUse	LightingElect	1.62	0.00
tblEnergyUse	NT24E	7.99	0.00
tblEnergyUse	NT24NG	3.06	0.00
tblEnergyUse	T24E	0.14	0.00
tblEnergyUse	T24NG	0.73	0.00
tblFleetMix	HHD	0.04	1.00
tblFleetMix	LDA	0.58	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5880e-003	0.00
tblFleetMix	MCY	6.8120e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.1190e-003	0.00
tblFleetMix	MHD	9.5090e-003	0.00
tblFleetMix	OBUS	3.2130e-003	0.00
tblFleetMix	SBUS	6.0800e-004	0.00
tblFleetMix	UBUS	2.3430e-003	0.00
tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	CNW_TTP	41.00	0.00

tblVehicleTrips	CW_TL	10.00	60.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	0.42
tblVehicleTrips	SU_TR	1.68	0.42
tblVehicleTrips	WD_TR	1.68	0.42
tblWater	IndoorWaterUseRate	116,147,625.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.0759	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	4.2392	126.6248	24.3536	0.4542	11.0990	0.5739	11.6729	3.0428	0.5491	3.5919		47,811.6502	47,811.6502	1.0228		47,837.2196
Total	**17.3151**	**126.6254**	**24.4252**	**0.4543**	**11.0990**	**0.5742**	**11.6732**	**3.0428**	**0.5493**	**3.5922**		**47,811.8027**	**47,811.8027**	**1.0232**	**0.0000**	**47,837.3824**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.0759	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	4.2392	126.6248	24.3536	0.4542	11.0990	0.5739	11.6729	3.0428	0.5491	3.5919		47,811.6502	47,811.6502	1.0228		47,837.2196
Total	**17.3151**	**126.6254**	**24.4252**	**0.4543**	**11.0990**	**0.5742**	**11.6732**	**3.0428**	**0.5493**	**3.5922**		**47,811.8027**	**47,811.8027**	**1.0232**	**0.0000**	**47,837.3824**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2392	126.6248	24.3536	0.4542	11.0990	0.5739	11.6729	3.0428	0.5491	3.5919		47,811.6502	47,811.6502	1.0228		47,837.2196
Unmitigated	4.2392	126.6248	24.3536	0.4542	11.0990	0.5739	11.6729	3.0428	0.5491	3.5919		47,811.6502	47,811.6502	1.0228		47,837.2196

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	211.45	211.45	211.45	4,618,137	4,618,137
Total	211.45	211.45	211.45	4,618,137	4,618,137

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No Rail	60.00	5.00	7.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Parking Lot	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Refrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.0759	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Unmitigated	13.0759	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.0128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.0564					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.7400e-003	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Total	**13.0759**	**6.6000e-004**	**0.0716**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**		**0.1525**	**0.1525**	**4.1000e-004**		**0.1627**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.0128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.0564					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.7400e-003	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Total	**13.0759**	**6.6000e-004**	**0.0716**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**		**0.1525**	**0.1525**	**4.1000e-004**		**0.1627**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Project - Trucks

Solano-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	502.26	1000sqft	11.53	502,264.00	0
Other Asphalt Surfaces	15.85	Acre	15.85	690,556.68	0
Parking Lot	178.75	1000sqft	4.10	178,750.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided.

Construction Phase - Truck mobile emissions only

Vehicle Trips - See AQ/GHG appendix for details.

Fleet Mix - Truck emissions only.

Energy Use - Truck emissions only

Water And Wastewater - Truck emissions only

Road Dust - Assumes all project-related trucks travel on paved roadways.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	1.00
tblConstructionPhase	PhaseEndDate	2/25/2019	1/15/2019
tblEnergyUse	LightingElect	1.62	0.00
tblEnergyUse	NT24E	7.99	0.00
tblEnergyUse	NT24NG	3.06	0.00
tblEnergyUse	T24E	0.14	0.00
tblEnergyUse	T24NG	0.73	0.00
tblFleetMix	HHD	0.04	1.00
tblFleetMix	LDA	0.58	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5880e-003	0.00
tblFleetMix	MCY	6.8120e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.1190e-003	0.00
tblFleetMix	MHD	9.5090e-003	0.00
tblFleetMix	OBUS	3.2130e-003	0.00
tblFleetMix	SBUS	6.0800e-004	0.00
tblFleetMix	UBUS	2.3430e-003	0.00
tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	CNW_TTP	41.00	0.00

tblVehicleTrips	CW_TL	10.00	60.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	0.42
tblVehicleTrips	SU_TR	1.68	0.42
tblVehicleTrips	WD_TR	1.68	0.42
tblWater	IndoorWaterUseRate	116,147,625.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.5750	35.8287	22.4742	0.0399	13.3533	1.7957	15.1490	1.3505	1.6704	3.0209	0.0000	3,929.4315	3,929.4315	1.0651	0.0000	3,956.0577
Maximum	**3.5750**	**35.8287**	**22.4742**	**0.0399**	**13.3533**	**1.7957**	**15.1490**	**1.3505**	**1.6704**	**3.0209**	**0.0000**	**3,929.4315**	**3,929.4315**	**1.0651**	**0.0000**	**3,956.0577**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.5750	35.8287	22.4742	0.0399	0.1082	1.7957	1.9039	0.0288	1.6704	1.6992	0.0000	3,929.4314	3,929.4314	1.0651	0.0000	3,956.0576
Maximum	**3.5750**	**35.8287**	**22.4742**	**0.0399**	**0.1082**	**1.7957**	**1.9039**	**0.0288**	**1.6704**	**1.6992**	**0.0000**	**3,929.4314**	**3,929.4314**	**1.0651**	**0.0000**	**3,956.0576**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**99.19**	**0.00**	**87.43**	**97.87**	**0.00**	**43.75**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.0759	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	4.2957	133.1193	25.2751	0.4504	11.0990	0.5783	11.6773	3.0428	0.5533	3.5961		47,409.2146	47,409.2146	1.0912		47,436.4954
Total	**17.3715**	**133.1200**	**25.3467**	**0.4504**	**11.0990**	**0.5786**	**11.6775**	**3.0428**	**0.5535**	**3.5963**		**47,409.3672**	**47,409.3672**	**1.0916**	**0.0000**	**47,436.6582**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	13.0759	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	4.2957	133.1193	25.2751	0.4504	11.0990	0.5783	11.6773	3.0428	0.5533	3.5961		47,409.2146	47,409.2146	1.0912		47,436.4954
Total	**17.3715**	**133.1200**	**25.3467**	**0.4504**	**11.0990**	**0.5786**	**11.6775**	**3.0428**	**0.5535**	**3.5963**		**47,409.3672**	**47,409.3672**	**1.0916**	**0.0000**	**47,436.6582**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/15/2019	1/15/2019	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 19.95

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**		**1.7949**	**1.7949**		**1.6697**	**1.6697**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0457	0.4142	1.1300e-003	13.3533	8.0000e-004	13.3541	1.3505	7.3000e-004	1.3512		112.5321	112.5321	3.2200e-003		112.6126
Total	**0.0616**	**0.0457**	**0.4142**	**1.1300e-003**	**13.3533**	**8.0000e-004**	**13.3541**	**1.3505**	**7.3000e-004**	**1.3512**		**112.5321**	**112.5321**	**3.2200e-003**		**112.6126**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**		**1.7949**	**1.7949**		**1.6697**	**1.6697**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0457	0.4142	1.1300e-003	0.1082	8.0000e-004	0.1090	0.0288	7.3000e-004	0.0295		112.5321	112.5321	3.2200e-003		112.6126
Total	**0.0616**	**0.0457**	**0.4142**	**1.1300e-003**	**0.1082**	**8.0000e-004**	**0.1090**	**0.0288**	**7.3000e-004**	**0.0295**		**112.5321**	**112.5321**	**3.2200e-003**		**112.6126**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2957	133.1193	25.2751	0.4504	11.0990	0.5783	11.6773	3.0428	0.5533	3.5961		47,409.2146	47,409.2146	1.0912		47,436.4954
Unmitigated	4.2957	133.1193	25.2751	0.4504	11.0990	0.5783	11.6773	3.0428	0.5533	3.5961		47,409.2146	47,409.2146	1.0912		47,436.4954

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	211.45	211.45	211.45	4,618,137	4,618,137
Total	211.45	211.45	211.45	4,618,137	4,618,137

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No Rail	60.00	5.00	7.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Parking Lot	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Refrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.0759	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Unmitigated	13.0759	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.0128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.0564					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.7400e-003	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Total	**13.0759**	**6.6000e-004**	**0.0716**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**		**0.1525**	**0.1525**	**4.1000e-004**		**0.1627**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.0128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	11.0564					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.7400e-003	6.6000e-004	0.0716	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1525	0.1525	4.1000e-004		0.1627
Total	**13.0759**	**6.6000e-004**	**0.0716**	**1.0000e-005**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**		**0.1525**	**0.1525**	**4.1000e-004**		**0.1627**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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Appendix D – Approved Project: CalEEMod Operation

Remaining Approved Operation

Solano-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,377.00	1000sqft	105.40	1,377,000.00	0
General Light Industry	2,272.50	1000sqft	214.40	2,272,500.00	0
City Park	129.10	Acre	129.10	5,623,596.00	0
Regional Shopping Center	1,328.60	1000sqft	142.20	1,328,600.00	0
Strip Mall	560.80	1000sqft	51.90	560,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on original land use buildout numbers and currently developed land uses.

Construction Phase - Operation run only.

Vehicle Trips - See the AQ/GHG appendix for further details.

Road Dust - Assume 100% Pave.

Area Coating -

Water And Wastewater - Assumes 100% aerobic.

Solid Waste -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	700.00	1.00
tblFleetMix	HHD	0.04	0.00
tblFleetMix	LDA	0.58	0.62
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.5880e-003	0.00
tblFleetMix	MCY	6.8120e-003	7.2839e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	1.1190e-003	0.00
tblFleetMix	MHD	9.5090e-003	0.00
tblFleetMix	OBUS	3.2130e-003	0.00
tblFleetMix	SBUS	6.0800e-004	0.00
tblFleetMix	UBUS	2.3430e-003	0.00
tblLandUse	LotAcreage	31.61	105.40
tblLandUse	LotAcreage	52.17	214.40
tblLandUse	LotAcreage	30.50	142.20
tblLandUse	LotAcreage	12.87	51.90

tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	1.32	0.98
tblVehicleTrips	ST_TR	2.46	4.49
tblVehicleTrips	ST_TR	49.97	24.44
tblVehicleTrips	ST_TR	42.04	46.92
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	0.68	0.98
tblVehicleTrips	SU_TR	1.05	1.92
tblVehicleTrips	SU_TR	25.24	12.34
tblVehicleTrips	SU_TR	20.43	22.80
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	6.97	0.98
tblVehicleTrips	WD_TR	11.03	20.15
tblVehicleTrips	WD_TR	42.70	20.88
tblVehicleTrips	WD_TR	44.32	49.47
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	25.5409	4.8000e-004	0.0524	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1013	0.1013	2.7000e-004	0.0000	0.1081
Energy	0.4689	4.2631	3.5810	0.0256		0.3240	0.3240		0.3240	0.3240	0.0000	23,119.7654	23,119.7654	0.9245	0.2580	23,219.7497
Mobile	24.8429	137.6019	262.8116	0.9050	67.2877	0.8965	68.1841	18.0299	0.8429	18.8727	0.0000	83,096.6397	83,096.6397	3.9121	0.0000	83,194.4423
Waste						0.0000	0.0000		0.0000	0.0000	1,236.9214	0.0000	1,236.9214	73.1000	0.0000	3,064.4204
Water						0.0000	0.0000		0.0000	0.0000	322.0329	1,829.4639	2,151.4967	1.1911	0.7174	2,395.0695
Total	**50.8527**	**141.8655**	**266.4450**	**0.9306**	**67.2877**	**1.2206**	**68.5083**	**18.0299**	**1.1670**	**19.1969**	**1,558.9543**	**108,045.9703**	**109,604.9245**	**79.1280**	**0.9754**	**111,873.7899**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	25.5409	4.8000e-004	0.0524	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1013	0.1013	2.7000e-004	0.0000	0.1081
Energy	0.4689	4.2631	3.5810	0.0256		0.3240	0.3240		0.3240	0.3240	0.0000	23,119.7654	23,119.7654	0.9245	0.2580	23,219.7497
Mobile	24.8429	137.6019	262.8116	0.9050	67.2877	0.8965	68.1841	18.0299	0.8429	18.8727	0.0000	83,096.6397	83,096.6397	3.9121	0.0000	83,194.4423
Waste						0.0000	0.0000		0.0000	0.0000	1,236.9214	0.0000	1,236.9214	73.1000	0.0000	3,064.4204
Water						0.0000	0.0000		0.0000	0.0000	257.6263	1,518.7105	1,776.3368	0.9554	0.5745	1,971.4110
Total	**50.8527**	**141.8655**	**266.4450**	**0.9306**	**67.2877**	**1.2206**	**68.5083**	**18.0299**	**1.1670**	**19.1969**	**1,494.5477**	**107,735.2169**	**109,229.7645**	**78.8922**	**0.8324**	**111,450.1314**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.13**	**0.29**	**0.34**	**0.30**	**14.66**	**0.38**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	24.8429	137.6019	262.8116	0.9050	67.2877	0.8965	68.1841	18.0299	0.8429	18.8727	0.0000	83,096.6397	83,096.6397	3.9121	0.0000	83,194.4423
Unmitigated	24.8429	137.6019	262.8116	0.9050	67.2877	0.8965	68.1841	18.0299	0.8429	18.8727	0.0000	83,096.6397	83,096.6397	3.9121	0.0000	83,194.4423

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Light Industry	2,227.05	2,227.05	2227.05	9,270,104	9,270,104
General Office Building	27,746.55	6,182.73	2643.84	65,894,533	65,894,533
Regional Shopping Center	27,741.17	32,470.98	16394.92	57,217,361	57,217,361
Strip Mall	27,742.78	26,312.74	12786.24	47,697,801	47,697,801
Total	85,457.54	67,193.50	34,052.05	180,079,798	180,079,798

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	15.00	8.00	9.00	33.00	48.00	19.00	66	28	6
General Light Industry	15.00	8.00	9.00	59.00	28.00	13.00	92	5	3
General Office Building	15.00	8.00	9.00	33.00	48.00	19.00	77	19	4
Regional Shopping Center	15.00	8.00	9.00	16.30	64.70	19.00	54	35	11
Strip Mall	15.00	8.00	9.00	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
General Light Industry	0.619373	0.040285	0.187014	0.124150	0.021893	0.000000	0.000000	0.000000	0.000000	0.000000	0.007284	0.000000	0.000000
General Office Building	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Regional Shopping Center	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Strip Mall	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	18,478.8261	18,478.8261	0.8356	0.1729	18,551.2316
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	18,478.8261	18,478.8261	0.8356	0.1729	18,551.2316
NaturalGas Mitigated	0.4689	4.2631	3.5810	0.0256		0.3240	0.3240		0.3240	0.3240	0.0000	4,640.9393	4,640.9393	0.0890	0.0851	4,668.5181
NaturalGas Unmitigated	0.4689	4.2631	3.5810	0.0256		0.3240	0.3240		0.3240	0.3240	0.0000	4,640.9393	4,640.9393	0.0890	0.0851	4,668.5181

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	5.99486e+007	0.3233	2.9387	2.4685	0.0176		0.2233	0.2233		0.2233	0.2233	0.0000	3,199.0829	3,199.0829	0.0613	0.0587	3,218.0935
General Office Building	2.25415e+007	0.1216	1.1050	0.9282	6.6300e-003		0.0840	0.0840		0.0840	0.0840	0.0000	1,202.8998	1,202.8998	0.0231	0.0221	1,210.0480
Regional Shopping Center	3.14878e+006	0.0170	0.1544	0.1297	9.3000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	168.0310	168.0310	3.2200e-003	3.0800e-003	169.0295
Strip Mall	1.3291e+006	7.1700e-003	0.0652	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003	0.0000	70.9256	70.9256	1.3600e-003	1.3000e-003	71.3471
Total		**0.4690**	**4.2631**	**3.5810**	**0.0256**		**0.3240**	**0.3240**		**0.3240**	**0.3240**	**0.0000**	**4,640.9393**	**4,640.9393**	**0.0890**	**0.0851**	**4,668.5181**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	5.99486e+007	0.3233	2.9387	2.4685	0.0176		0.2233	0.2233		0.2233	0.2233	0.0000	3,199.0829	3,199.0829	0.0613	0.0587	3,218.0935
General Office Building	2.25415e+007	0.1216	1.1050	0.9282	6.6300e-003		0.0840	0.0840		0.0840	0.0840	0.0000	1,202.8998	1,202.8998	0.0231	0.0221	1,210.0480
Regional Shopping Center	3.14878e+006	0.0170	0.1544	0.1297	9.3000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	168.0310	168.0310	3.2200e-003	3.0800e-003	169.0295
Strip Mall	1.3291e+006	7.1700e-003	0.0652	0.0547	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003	0.0000	70.9256	70.9256	1.3600e-003	1.3000e-003	71.3471
Total		**0.4690**	**4.2631**	**3.5810**	**0.0256**		**0.3240**	**0.3240**		**0.3240**	**0.3240**	**0.0000**	**4,640.9393**	**4,640.9393**	**0.0890**	**0.0851**	**4,668.5181**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	1.87709e+007	5,460.6555	0.2469	0.0511	5,482.0520
General Office Building	2.45519e+007	7,142.4321	0.3230	0.0668	7,170.4183
Regional Shopping Center	1.42027e+007	4,131.7382	0.1868	0.0387	4,147.9276
Strip Mall	5.99495e+006	1,744.0003	0.0789	0.0163	1,750.8338
Total		**18,478.8261**	**0.8356**	**0.1729**	**18,551.2316**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	1.87709e+007	5,460.6555	0.2469	0.0511	5,482.0520
General Office Building	2.45519e+007	7,142.4321	0.3230	0.0668	7,170.4183
Regional Shopping Center	1.42027e+007	4,131.7382	0.1868	0.0387	4,147.9276
Strip Mall	5.99495e+006	1,744.0003	0.0789	0.0163	1,750.8338
Total		**18,478.8261**	**0.8356**	**0.1729**	**18,551.2316**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	25.5409	4.8000e-004	0.0524	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1013	0.1013	2.7000e-004	0.0000	0.1081
Unmitigated	25.5409	4.8000e-004	0.0524	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1013	0.1013	2.7000e-004	0.0000	0.1081

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.8509					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	21.6851					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.9300e-003	4.8000e-004	0.0524	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1013	0.1013	2.7000e-004	0.0000	0.1081
Total	**25.5409**	**4.8000e-004**	**0.0524**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.1013**	**0.1013**	**2.7000e-004**	**0.0000**	**0.1081**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.8509					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	21.6851					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.9300e-003	4.8000e-004	0.0524	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.1013	0.1013	2.7000e-004	0.0000	0.1081
Total	**25.5409**	**4.8000e-004**	**0.0524**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.1013**	**0.1013**	**2.7000e-004**	**0.0000**	**0.1081**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,776.3368	0.9554	0.5745	1,971.4110
Unmitigated	2,151.4967	1.1911	0.7174	2,395.0695

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 153.82	156.6183	7.0800e-003	1.4700e-003	157.2319
General Light Industry	525.516 / 0	1,013.1539	0.6774	0.4121	1,152.8852
General Office Building	244.739 / 150.002	624.5689	0.3224	0.1933	690.2420
Regional Shopping Center	98.4128 / 60.3175	251.1469	0.1296	0.0777	277.5549
Strip Mall	41.5399 / 25.4599	106.0087	0.0547	0.0328	117.1555
Total		**2,151.4967**	**1.1911**	**0.7174**	**2,395.0695**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 144.437	147.0645	6.6500e-003	1.3800e-003	147.6408
General Light Industry	420.413 / 0	810.5231	0.5419	0.3297	922.3081
General Office Building	195.791 / 140.851	520.8846	0.2589	0.1549	573.5062
Regional Shopping Center	78.7302 / 56.6381	209.4542	0.1041	0.0623	230.6140
Strip Mall	33.2319 / 23.9069	88.4103	0.0439	0.0263	97.3418
Total		**1,776.3368**	**0.9554**	**0.5745**	**1,971.4110**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,236.9214	73.1000	0.0000	3,064.4204
Unmitigated	1,236.9214	73.1000	0.0000	3,064.4204

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	11.1	2.2532	0.1332	0.0000	5.5822
General Light Industry	2817.9	572.0082	33.8047	0.0000	1,417.1262
General Office Building	1280.61	259.9523	15.3627	0.0000	644.0207
Regional Shopping Center	1395.03	283.1785	16.7354	0.0000	701.5627
Strip Mall	588.84	119.5292	7.0640	0.0000	296.1285
Total		**1,236.9214**	**73.1000**	**0.0000**	**3,064.4204**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	11.1	2.2532	0.1332	0.0000	5.5822
General Light Industry	2817.9	572.0082	33.8047	0.0000	1,417.1262
General Office Building	1280.61	259.9523	15.3627	0.0000	644.0207
Regional Shopping Center	1395.03	283.1785	16.7354	0.0000	701.5627
Strip Mall	588.84	119.5292	7.0640	0.0000	296.1285
Total		**1,236.9214**	**73.1000**	**0.0000**	**3,064.4204**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Remaining Approved Operation

Solano-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,377.00	1000sqft	105.40	1,377,000.00	0
General Light Industry	2,272.50	1000sqft	214.40	2,272,500.00	0
City Park	129.10	Acre	129.10	5,623,596.00	0
Regional Shopping Center	1,328.60	1000sqft	142.20	1,328,600.00	0
Strip Mall	560.80	1000sqft	51.90	560,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on original land use buildout numbers and currently developed land uses.

Construction Phase - Operation run only.

Vehicle Trips - See the AQ/GHG appendix for further details.

Road Dust - Assume 100% Pave.

Area Coating -

Water And Wastewater - Assumes 100% aerobic.

Solid Waste -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	700.00	1.00
tblFleetMix	HHD	0.04	0.00
tblFleetMix	LDA	0.58	0.62
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.5880e-003	0.00
tblFleetMix	MCY	6.8120e-003	7.2839e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	1.1190e-003	0.00
tblFleetMix	MHD	9.5090e-003	0.00
tblFleetMix	OBUS	3.2130e-003	0.00
tblFleetMix	SBUS	6.0800e-004	0.00
tblFleetMix	UBUS	2.3430e-003	0.00
tblLandUse	LotAcreage	31.61	105.40
tblLandUse	LotAcreage	52.17	214.40
tblLandUse	LotAcreage	30.50	142.20
tblLandUse	LotAcreage	12.87	51.90
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	1.32	0.98
tblVehicleTrips	ST_TR	2.46	4.49
tblVehicleTrips	ST_TR	49.97	24.44
tblVehicleTrips	ST_TR	42.04	46.92
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	0.68	0.98
tblVehicleTrips	SU_TR	1.05	1.92
tblVehicleTrips	SU_TR	25.24	12.34
tblVehicleTrips	SU_TR	20.43	22.80
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	6.97	0.98
tblVehicleTrips	WD_TR	11.03	20.15
tblVehicleTrips	WD_TR	42.70	20.88
tblVehicleTrips	WD_TR	44.32	49.47
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	139.9779	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236
Energy	2.5696	23.3596	19.6221	0.1402		1.7753	1.7753		1.7753	1.7753		28,031.5610	28,031.5610	0.5373	0.5139	28,198.1386
Mobile	190.0185	886.6568	1,814.8620	6.3868	461.6095	5.9339	467.5434	123.3560	5.5790	128.9350		646,059.0179	646,059.0179	28.5375		646,772.4555
Total	**332.5659**	**910.0218**	**1,835.0665**	**6.5270**	**461.6095**	**7.7114**	**469.3209**	**123.3560**	**7.3564**	**130.7124**		**674,091.8194**	**674,091.8194**	**29.0781**	**0.5139**	**674,971.9177**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	139.9779	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236
Energy	2.5696	23.3596	19.6221	0.1402		1.7753	1.7753		1.7753	1.7753		28,031.5610	28,031.5610	0.5373	0.5139	28,198.1386
Mobile	190.0185	886.6568	1,814.8620	6.3868	461.6095	5.9339	467.5434	123.3560	5.5790	128.9350		646,059.0179	646,059.0179	28.5375		646,772.4555
Total	**332.5659**	**910.0218**	**1,835.0665**	**6.5270**	**461.6095**	**7.7114**	**469.3209**	**123.3560**	**7.3564**	**130.7124**		**674,091.8194**	**674,091.8194**	**29.0781**	**0.5139**	**674,971.9177**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	190.0185	886.6568	1,814.8620	6.3868	461.6095	5.9339	467.5434	123.3560	5.5790	128.9350		646,059.0179	646,059.0179	28.5375		646,772.4555
Unmitigated	190.0185	886.6568	1,814.8620	6.3868	461.6095	5.9339	467.5434	123.3560	5.5790	128.9350		646,059.0179	646,059.0179	28.5375		646,772.4555

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Light Industry	2,227.05	2,227.05	2227.05	9,270,104	9,270,104
General Office Building	27,746.55	6,182.73	2643.84	65,894,533	65,894,533
Regional Shopping Center	27,741.17	32,470.98	16394.92	57,217,361	57,217,361
Strip Mall	27,742.78	26,312.74	12786.24	47,697,801	47,697,801
Total	85,457.54	67,193.50	34,052.05	180,079,798	180,079,798

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	15.00	8.00	9.00	33.00	48.00	19.00	66	28	6
General Light Industry	15.00	8.00	9.00	59.00	28.00	13.00	92	5	3
General Office Building	15.00	8.00	9.00	33.00	48.00	19.00	77	19	4
Regional Shopping Center	15.00	8.00	9.00	16.30	64.70	19.00	54	35	11
Strip Mall	15.00	8.00	9.00	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
General Light Industry	0.619373	0.040285	0.187014	0.124150	0.021893	0.000000	0.000000	0.000000	0.000000	0.000000	0.007284	0.000000	0.000000
General Office Building	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Regional Shopping Center	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Strip Mall	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.5696	23.3596	19.6221	0.1402		1.7753	1.7753		1.7753	1.7753		28,031.5610	28,031.5610	0.5373	0.5139	28,198.1386
NaturalGas Unmitigated	2.5696	23.3596	19.6221	0.1402		1.7753	1.7753		1.7753	1.7753		28,031.5610	28,031.5610	0.5373	0.5139	28,198.1386

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	164243	1.7712	16.1022	13.5259	0.0966		1.2238	1.2238		1.2238	1.2238		19,322.6592	19,322.6592	0.3704	0.3543	19,437.4841
General Office Building	61757.5	0.6660	6.0547	5.0859	0.0363		0.4602	0.4602		0.4602	0.4602		7,265.5890	7,265.5890	0.1393	0.1332	7,308.7648
Regional Shopping Center	8626.8	0.0930	0.8458	0.7104	5.0700e-003		0.0643	0.0643		0.0643	0.0643		1,014.9177	1,014.9177	0.0195	0.0186	1,020.9488
Strip Mall	3641.36	0.0393	0.3570	0.2999	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.3952	428.3952	8.2100e-003	7.8500e-003	430.9409
Total		**2.5696**	**23.3596**	**19.6221**	**0.1402**		**1.7753**	**1.7753**		**1.7753**	**1.7753**		**28,031.5610**	**28,031.5610**	**0.5373**	**0.5139**	**28,198.1386**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	164.243	1.7712	16.1022	13.5259	0.0966		1.2238	1.2238		1.2238	1.2238		19,322.6592	19,322.6592	0.3704	0.3543	19,437.4841
General Office Building	61.7575	0.6660	6.0547	5.0859	0.0363		0.4602	0.4602		0.4602	0.4602		7,265.5890	7,265.5890	0.1393	0.1332	7,308.7648
Regional Shopping Center	8.6268	0.0930	0.8458	0.7104	5.0700e-003		0.0643	0.0643		0.0643	0.0643		1,014.9177	1,014.9177	0.0195	0.0186	1,020.9488
Strip Mall	3.64136	0.0393	0.3570	0.2999	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.3952	428.3952	8.2100e-003	7.8500e-003	430.9409
Total		**2.5696**	**23.3596**	**19.6221**	**0.1402**		**1.7753**	**1.7753**		**1.7753**	**1.7753**		**28,031.5610**	**28,031.5610**	**0.5373**	**0.5139**	**28,198.1386**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	139.9779	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236
Unmitigated	139.9779	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.1009					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	118.8222					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0548	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236
Total	**139.9779**	**5.3800e-003**	**0.5824**	**4.0000e-005**		**2.0900e-003**	**2.0900e-003**		**2.0900e-003**	**2.0900e-003**		**1.2405**	**1.2405**	**3.3300e-003**		**1.3236**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.1009					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	118.8222					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0548	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236
Total	**139.9779**	**5.3800e-003**	**0.5824**	**4.0000e-005**		**2.0900e-003**	**2.0900e-003**		**2.0900e-003**	**2.0900e-003**		**1.2405**	**1.2405**	**3.3300e-003**		**1.3236**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Remaining Approved Operation

Solano-Sacramento County, Mitigation Report

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	16.99	17.44	19.79	19.93	17.69
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.30	0.65		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			

No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Remaining Approved Operation

Solano-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,377.00	1000sqft	105.40	1,377,000.00	0
General Light Industry	2,272.50	1000sqft	214.40	2,272,500.00	0
City Park	129.10	Acre	129.10	5,623,596.00	0
Regional Shopping Center	1,328.60	1000sqft	142.20	1,328,600.00	0
Strip Mall	560.80	1000sqft	51.90	560,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on original land use buildout numbers and currently developed land uses.

Construction Phase - Operation run only.

Vehicle Trips - See the AQ/GHG appendix for further details.

Road Dust - Assume 100% Pave.

Area Coating -

Water And Wastewater - Assumes 100% aerobic.

Solid Waste -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	700.00	1.00
tblFleetMix	HHD	0.04	0.00
tblFleetMix	LDA	0.58	0.62
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.17	0.19
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.5880e-003	0.00
tblFleetMix	MCY	6.8120e-003	7.2839e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	1.1190e-003	0.00
tblFleetMix	MHD	9.5090e-003	0.00
tblFleetMix	OBUS	3.2130e-003	0.00
tblFleetMix	SBUS	6.0800e-004	0.00
tblFleetMix	UBUS	2.3430e-003	0.00
tblLandUse	LotAcreage	31.61	105.40
tblLandUse	LotAcreage	52.17	214.40
tblLandUse	LotAcreage	30.50	142.20
tblLandUse	LotAcreage	12.87	51.90
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

tblRoadDust	RoadPercentPave	94	100
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	1.32	0.98
tblVehicleTrips	ST_TR	2.46	4.49
tblVehicleTrips	ST_TR	49.97	24.44
tblVehicleTrips	ST_TR	42.04	46.92
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	0.68	0.98
tblVehicleTrips	SU_TR	1.05	1.92
tblVehicleTrips	SU_TR	25.24	12.34
tblVehicleTrips	SU_TR	20.43	22.80
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	6.97	0.98
tblVehicleTrips	WD_TR	11.03	20.15
tblVehicleTrips	WD_TR	42.70	20.88
tblVehicleTrips	WD_TR	44.32	49.47
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00

tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	139.9779	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236
Energy	2.5696	23.3596	19.6221	0.1402		1.7753	1.7753		1.7753	1.7753		28,031.5610	28,031.5610	0.5373	0.5139	28,198.1386
Mobile	160.5454	929.3540	1,862.6462	5.9069	461.6095	6.0138	467.6233	123.3560	5.6554	129.0114		597,611.4204	597,611.4204	29.7103		598,354.1787
Total	**303.0929**	**952.7190**	**1,882.8507**	**6.0471**	**461.6095**	**7.7912**	**469.4007**	**123.3560**	**7.4328**	**130.7888**		**625,644.2218**	**625,644.2218**	**30.2509**	**0.5139**	**626,553.6409**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	139.9779	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236
Energy	2.5696	23.3596	19.6221	0.1402		1.7753	1.7753		1.7753	1.7753		28,031.5610	28,031.5610	0.5373	0.5139	28,198.1386
Mobile	160.5454	929.3540	1,862.6462	5.9069	461.6095	6.0138	467.6233	123.3560	5.6554	129.0114		597,611.4204	597,611.4204	29.7103		598,354.1787
Total	**303.0929**	**952.7190**	**1,882.8507**	**6.0471**	**461.6095**	**7.7912**	**469.4007**	**123.3560**	**7.4328**	**130.7888**		**625,644.2218**	**625,644.2218**	**30.2509**	**0.5139**	**626,553.6409**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	160.5454	929.3540	1,862.6462	5.9069	461.6095	6.0138	467.6233	123.3560	5.6554	129.0114		597,611.4204	597,611.4204	29.7103		598,354.1787
Unmitigated	160.5454	929.3540	1,862.6462	5.9069	461.6095	6.0138	467.6233	123.3560	5.6554	129.0114		597,611.4204	597,611.4204	29.7103		598,354.1787

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Light Industry	2,227.05	2,227.05	2227.05	9,270,104	9,270,104
General Office Building	27,746.55	6,182.73	2643.84	65,894,533	65,894,533
Regional Shopping Center	27,741.17	32,470.98	16394.92	57,217,361	57,217,361
Strip Mall	27,742.78	26,312.74	12786.24	47,697,801	47,697,801
Total	85,457.54	67,193.50	34,052.05	180,079,798	180,079,798

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	15.00	8.00	9.00	33.00	48.00	19.00	66	28	6
General Light Industry	15.00	8.00	9.00	59.00	28.00	13.00	92	5	3
General Office Building	15.00	8.00	9.00	33.00	48.00	19.00	77	19	4
Regional Shopping Center	15.00	8.00	9.00	16.30	64.70	19.00	54	35	11
Strip Mall	15.00	8.00	9.00	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
General Light Industry	0.619373	0.040285	0.187014	0.124150	0.021893	0.000000	0.000000	0.000000	0.000000	0.000000	0.007284	0.000000	0.000000
General Office Building	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Regional Shopping Center	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119
Strip Mall	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.5696	23.3596	19.6221	0.1402		1.7753	1.7753		1.7753	1.7753		28,031.5610	28,031.5610	0.5373	0.5139	28,198.1386
NaturalGas Unmitigated	2.5696	23.3596	19.6221	0.1402		1.7753	1.7753		1.7753	1.7753		28,031.5610	28,031.5610	0.5373	0.5139	28,198.1386

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	164243	1.7712	16.1022	13.5259	0.0966		1.2238	1.2238		1.2238	1.2238		19,322.6592	19,322.6592	0.3704	0.3543	19,437.4841
General Office Building	61757.5	0.6660	6.0547	5.0859	0.0363		0.4602	0.4602		0.4602	0.4602		7,265.5890	7,265.5890	0.1393	0.1332	7,308.7648
Regional Shopping Center	8626.8	0.0930	0.8458	0.7104	5.0700e-003		0.0643	0.0643		0.0643	0.0643		1,014.9177	1,014.9177	0.0195	0.0186	1,020.9488
Strip Mall	3641.36	0.0393	0.3570	0.2999	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.3952	428.3952	8.2100e-003	7.8500e-003	430.9409
Total		**2.5696**	**23.3596**	**19.6221**	**0.1402**		**1.7753**	**1.7753**		**1.7753**	**1.7753**		**28,031.5610**	**28,031.5610**	**0.5373**	**0.5139**	**28,198.1386**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	164.243	1.7712	16.1022	13.5259	0.0966		1.2238	1.2238		1.2238	1.2238		19,322.6592	19,322.6592	0.3704	0.3543	19,437.4841
General Office Building	61.7575	0.6660	6.0547	5.0859	0.0363		0.4602	0.4602		0.4602	0.4602		7,265.5890	7,265.5890	0.1393	0.1332	7,308.7648
Regional Shopping Center	8.6268	0.0930	0.8458	0.7104	5.0700e-003		0.0643	0.0643		0.0643	0.0643		1,014.9177	1,014.9177	0.0195	0.0186	1,020.9488
Strip Mall	3.64136	0.0393	0.3570	0.2999	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.3952	428.3952	8.2100e-003	7.8500e-003	430.9409
Total		**2.5696**	**23.3596**	**19.6221**	**0.1402**		**1.7753**	**1.7753**		**1.7753**	**1.7753**		**28,031.5610**	**28,031.5610**	**0.5373**	**0.5139**	**28,198.1386**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	139.9779	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236
Unmitigated	139.9779	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.1009					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	118.8222					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0548	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236
Total	**139.9779**	**5.3800e-003**	**0.5824**	**4.0000e-005**		**2.0900e-003**	**2.0900e-003**		**2.0900e-003**	**2.0900e-003**		**1.2405**	**1.2405**	**3.3300e-003**		**1.3236**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	21.1009					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	118.8222					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0548	5.3800e-003	0.5824	4.0000e-005		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		1.2405	1.2405	3.3300e-003		1.3236
Total	**139.9779**	**5.3800e-003**	**0.5824**	**4.0000e-005**		**2.0900e-003**	**2.0900e-003**		**2.0900e-003**	**2.0900e-003**		**1.2405**	**1.2405**	**3.3300e-003**		**1.3236**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Remaining Approved Operation_Trucks

Solano-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	2,272.50	1000sqft	214.40	2,272,500.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on original land use buildout numbers and currently developed land uses.

Construction Phase - Operation run only.

Vehicle Trips - See the AQ/GHG appendix for further details.

Road Dust - Assume 100% Pave.

Area Coating - Truck emissions only.

Water And Wastewater - Assumes 100% aerobic.

Solid Waste - Truck emissions only

Water Mitigation -

Energy Use - Truck emissions only.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	1136250	0
tblAreaCoating	Area_Nonresidential_Interior	3408750	0
tblConstructionPhase	NumDays	300.00	1.00
tblConstructionPhase	PhaseEndDate	9/17/2021	1/14/2019
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.70	0.00
tblEnergyUse	NT24NG	6.67	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	19.71	0.00
tblLandUse	LotAcreage	52.17	214.40
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblSolidWaste	SolidWasteGenerationRate	2,817.90	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TL	15.00	60.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.32	0.42

tblVehicleTrips	SU_TR	0.68	0.42
tblVehicleTrips	WD_TR	6.97	0.42
tblWater	IndoorWaterUseRate	525,515,625.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.8772	1.9000e-004	0.0210	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0406	0.0406	1.1000e-004	0.0000	0.0433
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.2662	9.2260	22.7978	0.0957	7.7954	0.0944	7.8897	2.0896	0.0889	2.1784	0.0000	8,775.9108	8,775.9108	0.2873	0.0000	8,783.0925
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**10.1434**	**9.2262**	**22.8189**	**0.0957**	**7.7954**	**0.0945**	**7.8898**	**2.0896**	**0.0889**	**2.1785**	**0.0000**	**8,775.9514**	**8,775.9514**	**0.2874**	**0.0000**	**8,783.1358**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.8772	1.9000e-004	0.0210	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0406	0.0406	1.1000e-004	0.0000	0.0433
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.2662	9.2260	22.7978	0.0957	7.7954	0.0944	7.8897	2.0896	0.0889	2.1784	0.0000	8,775.9108	8,775.9108	0.2873	0.0000	8,783.0925
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**10.1434**	**9.2262**	**22.8189**	**0.0957**	**7.7954**	**0.0945**	**7.8898**	**2.0896**	**0.0889**	**2.1785**	**0.0000**	**8,775.9514**	**8,775.9514**	**0.2874**	**0.0000**	**8,783.1358**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2662	9.2260	22.7978	0.0957	7.7954	0.0944	7.8897	2.0896	0.0889	2.1784	0.0000	8,775.9108	8,775.9108	0.2873	0.0000	8,783.0925
Unmitigated	1.2662	9.2260	22.7978	0.0957	7.7954	0.0944	7.8897	2.0896	0.0889	2.1784	0.0000	8,775.9108	8,775.9108	0.2873	0.0000	8,783.0925

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	954.45	954.45	954.45	20,845,188	20,845,188
Total	954.45	954.45	954.45	20,845,188	20,845,188

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	60.00	8.00	9.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.8772	1.9000e-004	0.0210	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0406	0.0406	1.1000e-004	0.0000	0.0433
Unmitigated	8.8772	1.9000e-004	0.0210	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0406	0.0406	1.1000e-004	0.0000	0.0433

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.8753					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.9800e-003	1.9000e-004	0.0210	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0406	0.0406	1.1000e-004	0.0000	0.0433
Total	**8.8772**	**1.9000e-004**	**0.0210**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0406**	**0.0406**	**1.1000e-004**	**0.0000**	**0.0433**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.8753					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.9800e-003	1.9000e-004	0.0210	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0406	0.0406	1.1000e-004	0.0000	0.0433
Total	**8.8772**	**1.9000e-004**	**0.0210**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0406**	**0.0406**	**1.1000e-004**	**0.0000**	**0.0433**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Remaining Approved Operation_Trucks

Solano-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	2,272.50	1000sqft	214.40	2,272,500.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on original land use buildout numbers and currently developed land uses.

Construction Phase - Operation run only.

Vehicle Trips - See the AQ/GHG appendix for further details.

Road Dust - Assume 100% Pave.

Area Coating - Truck emissions only.

Water And Wastewater - Assumes 100% aerobic.

Solid Waste - Truck emissions only

Water Mitigation -

Energy Use - Truck emissions only.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	1136250	0
tblAreaCoating	Area_Nonresidential_Interior	3408750	0
tblConstructionPhase	NumDays	300.00	1.00
tblConstructionPhase	PhaseEndDate	9/17/2021	1/14/2019
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.70	0.00
tblEnergyUse	NT24NG	6.67	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	19.71	0.00
tblLandUse	LotAcreage	52.17	214.40
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblSolidWaste	SolidWasteGenerationRate	2,817.90	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TL	15.00	60.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.32	0.42
tblVehicleTrips	SU_TR	0.68	0.42

tblVehicleTrips	WD_TR	6.97	0.42
tblWater	IndoorWaterUseRate	525,515,625.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	48.6535	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.3589	47.8179	140.5536	0.5596	44.2836	0.5189	44.8025	11.8375	0.4885	12.3259		56,523.1852	56,523.1852	1.8180		56,568.6356
Total	**56.0124**	**47.8200**	**140.7871**	**0.5596**	**44.2836**	**0.5197**	**44.8033**	**11.8375**	**0.4893**	**12.3267**		**56,523.6825**	**56,523.6825**	**1.8194**	**0.0000**	**56,569.1662**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	48.6535	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307

Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.3589	47.8179	140.5536	0.5596	44.2836	0.5189	44.8025	11.8375	0.4885	12.3259		56,523.1852	56,523.1852	1.8180		56,568.6356
Total	**56.0124**	**47.8200**	**140.7871**	**0.5596**	**44.2836**	**0.5197**	**44.8033**	**11.8375**	**0.4893**	**12.3267**		**56,523.6825**	**56,523.6825**	**1.8194**	**0.0000**	**56,569.1662**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.3589	47.8179	140.5536	0.5596	44.2836	0.5189	44.8025	11.8375	0.4885	12.3259		56,523.1852	56,523.1852	1.8180		56,568.6356
Unmitigated	7.3589	47.8179	140.5536	0.5596	44.2836	0.5189	44.8025	11.8375	0.4885	12.3259		56,523.1852	56,523.1852	1.8180		56,568.6356

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	954.45	954.45	954.45	20,845,188	20,845,188
Total	954.45	954.45	954.45	20,845,188	20,845,188

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	60.00	8.00	9.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	48.6535	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307
Unmitigated	48.6535	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	48.6315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0220	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307
Total	**48.6535**	**2.1600e-003**	**0.2335**	**2.0000e-005**		**8.4000e-004**	**8.4000e-004**		**8.4000e-004**	**8.4000e-004**		**0.4973**	**0.4973**	**1.3300e-003**		**0.5307**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	48.6315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0220	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307
Total	**48.6535**	**2.1600e-003**	**0.2335**	**2.0000e-005**		**8.4000e-004**	**8.4000e-004**		**8.4000e-004**	**8.4000e-004**		**0.4973**	**0.4973**	**1.3300e-003**		**0.5307**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Remaining Approved Operation_Trucks

Solano-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	2,272.50	1000sqft	214.40	2,272,500.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	56
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on original land use buildout numbers and currently developed land uses.

Construction Phase - Operation run only.

Vehicle Trips - See the AQ/GHG appendix for further details.

Road Dust - Assume 100% Pave.

Area Coating - Truck emissions only.

Water And Wastewater - Assumes 100% aerobic.

Solid Waste - Truck emissions only

Water Mitigation -

Energy Use - Truck emissions only.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	1136250	0
tblAreaCoating	Area_Nonresidential_Interior	3408750	0
tblConstructionPhase	NumDays	300.00	1.00
tblConstructionPhase	PhaseEndDate	9/17/2021	1/14/2019
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.70	0.00
tblEnergyUse	NT24NG	6.67	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	19.71	0.00
tblLandUse	LotAcreage	52.17	214.40
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	RoadPercentPave	94	100
tblSolidWaste	SolidWasteGenerationRate	2,817.90	0.00
tblVehicleTrips	CC_TTP	28.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CW_TL	15.00	60.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.32	0.42
tblVehicleTrips	SU_TR	0.68	0.42

tblVehicleTrips	WD_TR	6.97	0.42
tblWater	IndoorWaterUseRate	525,515,625.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	48.6535	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.0048	52.7263	127.5880	0.5192	44.2836	0.5197	44.8034	11.8375	0.4893	12.3267		52,498.9002	52,498.9002	1.7485		52,542.6131
Total	**55.6583**	**52.7285**	**127.8215**	**0.5192**	**44.2836**	**0.5206**	**44.8042**	**11.8375**	**0.4901**	**12.3276**		**52,499.3975**	**52,499.3975**	**1.7499**	**0.0000**	**52,543.1437**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	48.6535	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.0048	52.7263	127.5880	0.5192	44.2836	0.5197	44.8034	11.8375	0.4893	12.3267		52,498.9002	52,498.9002	1.7485		52,542.6131
Total	**55.6583**	**52.7285**	**127.8215**	**0.5192**	**44.2836**	**0.5206**	**44.8042**	**11.8375**	**0.4901**	**12.3276**		**52,499.3975**	**52,499.3975**	**1.7499**	**0.0000**	**52,543.1437**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.0048	52.7263	127.5880	0.5192	44.2836	0.5197	44.8034	11.8375	0.4893	12.3267		52,498.9002	52,498.9002	1.7485		52,542.6131
Unmitigated	7.0048	52.7263	127.5880	0.5192	44.2836	0.5197	44.8034	11.8375	0.4893	12.3267		52,498.9002	52,498.9002	1.7485		52,542.6131

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	954.45	954.45	954.45	20,845,188	20,845,188
Total	954.45	954.45	954.45	20,845,188	20,845,188

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	60.00	8.00	9.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.579245	0.037675	0.174898	0.116107	0.020475	0.005588	0.009509	0.042408	0.003213	0.002343	0.006812	0.000608	0.001119

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	48.6535	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307
Unmitigated	48.6535	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	48.6315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0220	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307
Total	**48.6535**	**2.1600e-003**	**0.2335**	**2.0000e-005**		**8.4000e-004**	**8.4000e-004**		**8.4000e-004**	**8.4000e-004**		**0.4973**	**0.4973**	**1.3300e-003**		**0.5307**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	48.6315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0220	2.1600e-003	0.2335	2.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		0.4973	0.4973	1.3300e-003		0.5307
Total	**48.6535**	**2.1600e-003**	**0.2335**	**2.0000e-005**		**8.4000e-004**	**8.4000e-004**		**8.4000e-004**	**8.4000e-004**		**0.4973**	**0.4973**	**1.3300e-003**		**0.5307**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Remaining Approved Operation_Trucks

Solano-Sacramento County, Mitigation Report

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			

No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

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Appendix E – Operational Health Risk Assessment

January 2019 | Health Risk Assessment

NORTHEAST QUADRANT SPECIFIC PLAN

City of Dixon

Prepared for:

City of Dixon
Contact: Scott Greely
Associate Planner
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Prepared by:

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DXN-01

PLACEWORKS

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1. Introduction

Scannell Properties is considering the feasibility of a speculative warehouse project (proposed project) located on a 31.49-acre project site within the Northeast Quadrant Specific Plan area of the City of Dixon, Solano County, California. PlaceWorks was retained by the City of Dixon to conduct a health risk assessment (HRA) for the proposed project. The HRA was conducted in accordance with relevant and appropriate procedures of the US Environmental Protection Agency (USEPA), California Environmental Protection Agency (CalEPA), Office of Environmental Health and Hazard Assessment (OEHHA), and Yolo-Solano Air Quality Management District (YSAQMD). Guidance from these agencies recommends completion of health risk assessments to determine the impacts of hazardous air emissions upon sensitive receptors in the vicinity of the project.

This HRA considers the health impact to sensitive receptors (e.g., children at the nearby residences) of operational phase emissions from diesel trucks. It should be noted that these health impacts were based on conservative (i.e., health protective) assumptions. The USEPA and OEHHA note that conservative assumptions used in a risk assessment are intended to ensure that the estimated risks do not underestimate the actual risks (USEPA 2005; OEHHA 2015). Therefore, the estimated risks do not necessarily represent actual risks experienced by populations near a site. The use of conservative assumptions tends to produce upper-boundary estimates of risk and usually overestimate exposure and thus risk.

For residential-based receptors, the following conservative assumptions were used:

- It was assumed that maximum exposed residents (children and adults) stood outside at their residence for 24 hours per day, 350 days per year. In reality, California residents typically will spend on average 2 hours per day outdoors at their residences (USEPA 2011). This would result in lower estimated risk values.
- The calculated risk for infants from third trimester to age 2 is multiplied by a factor of 10 and for children from 2 to 16 years is multiplied by a factor of 3 to account for early life exposure and uncertainty in child versus adult exposure impacts.

Thus, the estimated risks provided in this HRA are conservative.

1. Introduction

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2. Project Description

2.1 PROJECT LOCATION

The Proposed Project is within the NQSP area and consists of approximately 39.7 acres at the northeast corner of Dorset Drive over the following three separate parcels:

- Site A, 25.69-acres, Assessor's Parcel Number (APN) 0111-190-010
- Site B, 5.80-acres, APN 0111-080-011
- Site C, 8.26-acres APN 0111-190-030

The primary development would occur over Sites A and B, which total approximately 31.49 acres. The project site is bounded by vacant land to the north, south, and east and by East Dorset Drive and a Walmart Supercenter to the west. Existing sensitive receptors proximate to the project site include residences approximately 650 feet southeast and 1,700 feet southwest of the project site.

2.2 PROJECT DESCRIPTION

The proposed project would develop a 502,264-square-foot Type III-b tilt-up industrial warehouse distribution facility that would contain approximately 492,264 square feet of high-cube warehouse space and 10,000 square feet for office space. The north and south side of the proposed warehouse building would each include 63 truck bays for a total of 126 truck bays. Approximately 110 standard parking spaces (180 square feet per space) and 289 trailer-sized parking spaces (550 square feet per space) would be provided on-site. It is assumed that the warehouse would operate 24 hours a day and 7 days a week.

The project site and vicinity are depicted in Figure 1. The off-site sensitive receptor locations are shown in Figure 2.

2. Project Description

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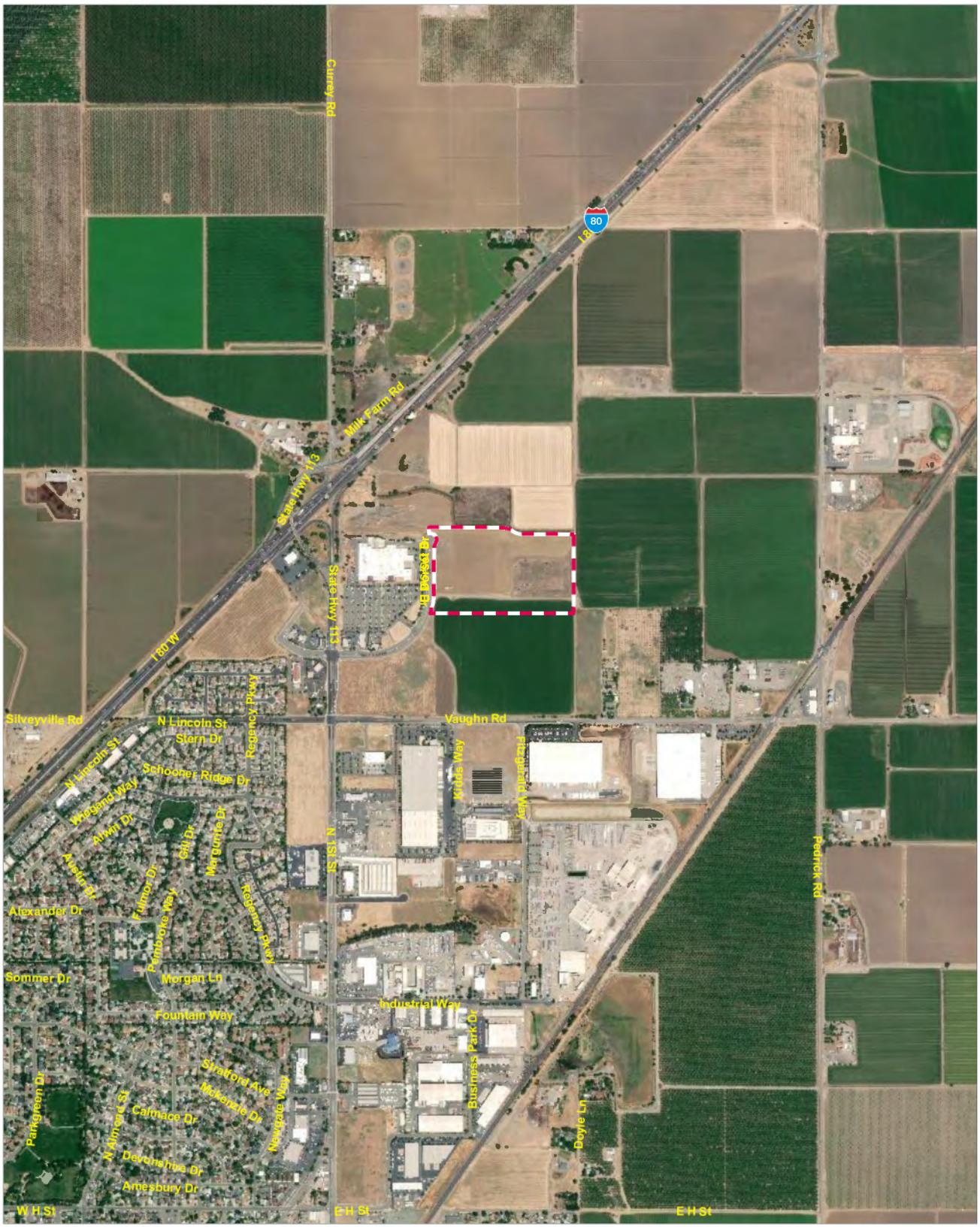

Source: ESRI, 2019

0 1,200
Scale (Feet)

Project Boundary

Figure 1
Site Location

2. Project Description

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Source: ESRI, 2019

0 700
Scale (Feet)

Project Boundary
Truck Route
Maximum Exposed Receptor - Residential
Receptors - Residential

Figure 2
Project Site and Off-Site Receptor Locations

2. Project Description

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3. Methodology and Significance Thresholds

The purpose of the HRA is to evaluate the potential health impacts from TACs and $PM_{2.5}$ emitted from diesel trucks during the project's operational phase. Operational emission sources include diesel trucks traveling on-site and idling at the proposed truck bays. The proposed project could also result in the installation of stationary sources of emissions. Emissions of stationary source TACs would be controlled by YSAQMD through permitting and would be subject to further study prior to the issuance of any necessary air quality permits under YSAQMD Regulation III, Rule 3-4, New Source Review, and Rule 3-13, Toxics New Source Review.

On July 11, 2007, the YSAQMD adopted the Handbook for Assessing and Mitigation Air Quality Impacts (Handbook). Pursuant to the Handbook, the following significance thresholds are utilized:

- Excess cancer risk of more than 10 in a million
- Non-cancer hazard index (chronic or acute) greater than 1.0

Since Solano County does not currently have qualified risk reduction plans, a site-specific analysis of TACs and $PM_{2.5}$ impacts on sensitive receptors was conducted. The methodology used in this HRA is consistent with the following YSAQMD and the OEHHA guidance documents:

- YSAQMD. 2007. *Handbook for Assessing and Mitigating Air Quality Impacts.* July 2007.
- OEHHA. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments.* February, 2015.

Potential exposures to diesel particulate matter (DPM) from proposed project operational activities were evaluated for off-site sensitive receptors in close proximity to the site, which includes residences to the southeast and southwest of the project site. Using air dispersion models, receptor concentrations were estimated and excess lifetime cancer risks and chronic non-cancer hazard indexes were calculated. These risks were then compared to the significance thresholds identified in the YSAQMD Handbook and adopted in this HRA.

3. Methodology and Significance Thresholds

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4. Emissions Inventories

Operational emission sources evaluated in the HRA include the diesel trucks traveling off-site along East Dorset Drive and North 1st Street to the Interstate 80 northbound on-ramp, on-site over the ingress and egress driveways, and on-site idling at truck bays. For purposes of this analysis, it is anticipated that any off-road equipment used on-site (e.g., forklifts) would be used within the proposed warehouse building and would be non-diesel-powered. To the degree practical, all contaminant emissions generated from each source were considered. The limiting factor for the inclusion of a compound was the availability of published exposure factors and other toxicity data enabling risks to be quantified and, where appropriate, target organs identified. The HRA evaluated projected truck volumes as compiled by PlaceWorks and truck fleet mix as provided by Scannell Properties.

To account for the emission standards representative of the California fleet, the California Air Resources Board (CARB) has developed the EMFAC2017 emission factor model (CARB 2018b). EMFAC2017 (version 1.0.2) was used to identify pollutant emission rates DPM. The PM_{10} emission factor for diesel-fueled vehicles was used as the surrogate for DPM.

4. Emissions Inventories

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5. Air Dispersion Modeling

Air quality modeling using the AERMOD atmospheric dispersion model was performed to assess the impact of emitted compounds on sensitive receptors near the project. The model is a steady state Gaussian plume model and is an approved model by YSAQMD for estimating ground-level impacts from point and fugitive sources in simple and complex terrain. The on-site operational emissions from truck travel were modeled as poly-area sources over the ingress and egress driveways, and the idling trucks sources were modeled as point sources at truck bays. Off-site emissions from truck travel were modeled as adjacent volume sources along East Dorset Drive and North 1st Street.

The model requires additional input parameters, including chemical emission data and local meteorology. Inputs for the operational phase emission rates are those described in Section 4. However, neither CARB nor YSAQMD provide AERMOD-ready meteorological (met) data for a met station within the City of Dixon. AERMOD-ready met data was obtained from CARB for the nearest representative met station with the five latest available years of record (Davis, 2009–2013) to represent local weather conditions and prevailing winds. The prevailing wind directions at the Davis met station are to the north and south, and the wind rose is provided in Appendix A.

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. To accommodate the model's Cartesian grid format, direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for each source location. In addition, digital elevation model (DEM) data for the area were obtained and included in the model runs to account for complex terrain. An emission release height of 4.15 meters was used as representative of the stack exhaust height for diesel truck traffic, and an initial vertical dispersion parameter of 1.93 meters was used, per CARB guidance (2000). Ground-level concentrations for emissions generated were for the proposed work hours of 24 per day, 7 days per week.

For all modeling runs, a unit emission rate of 1 gram per second was used. The unit emission rates were proportioned over the poly-area source for on-site truck travel emissions and over the adjacent volume sources for off-site truck travel emissions. The maximum AERMOD concentrations from the output files were then multiplied by the emission rates calculated in Appendix A to obtain the maximum ground-level concentrations at the maximum exposed receptor (MER). The AERMOD model output for the emission sources is in Appendix B. The model output concentrations for the operational phase sources are in Appendix C.

5. Air Dispersion Modeling

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6. Risk Characterizations

6.1 CARCINOGENIC CHEMICAL RISK

The YSAQMD has established a threshold of ten in a million (10×10^{-6}) as a level posing no significant risk for exposures to carcinogens (YSAQMD 2007).

Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. The cancer risk probability is determined by multiplying the chemical's annual concentration by its cancer potency factor (CPF), a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. It is an upper-limit estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ($\mu g/m^3$) over a lifetime of 70 years.

Recent guidance from OEHHA recommends a refinement to the standard point estimate approach with the use of age-specific breathing rates and age sensitivity factors (ASFs) to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the cancer potency factor in units of inverse dose expressed in milligrams per kilogram per day $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. Therefore, the following dose algorithm was used to accommodate the unique exposures associated with the residential receptors.

$$\text{Dose}_{\text{AIR,per age group}} = (C_{air} \times EF \times [\frac{BR}{BW}] \times A \times CF)$$

Where:

$Dose_{AIR}$	=	dose by inhalation (mg/kg-day), per age group
C_{air}	=	concentration of contaminant in air ($\mu g/m^3$)
EF	=	exposure frequency (number of days/365 days)
BR/BW	=	daily breathing rate normalized to body weight (L/kg-day)
A	=	inhalation absorption factor (default = 1)
CF	=	conversion factor ($1x10^{-6}$, µg to mg, L to m^3)

The inhalation absorption factor (A) is a unitless factor that is only used if the cancer potency factor included a correction for absorption across the lung. The default value of 1 was used for this assessment. The exposure frequency (EF) of 0.96 is used to represent 350 days per year to allow for a two-week period away from home each year (OEHHA 2015). The 95th percentile daily breathing rates (BR/BW), exposure duration (ED), ASFs, and fraction of time at home (FAH) for the various age groups are provided herein:

Age Groups	BR/BW (L/kg-day)	ED	ASF	FAH
Third trimester	361	0.25	10	0.85
0–2 age group	1,090	2	10	0.85
2–9 age group	861	7	3	0.72
2–16 age group	745	14	3	0.72
16–30 age group	335	14	1	0.73
16–70 age group	290	54	1	0.73

To calculate the overall cancer risk, the risk for each appropriate age group is calculated per the following equation:

$$\text{Cancer Risk}_{\text{AIR}} = \text{Dose}_{\text{AIR}} \times \text{CPF} \times \text{ASF} \times \frac{\text{ED}}{AT}$$

Where:

Dose_{AIR}	=	dose by inhalation (mg/kg-day), per age group
CPF	=	cancer potency factor, chemical-specific $(\text{mg/kg-day})^{-1}$
ASF	=	age sensitivity factor, per age group
FAH	=	fraction of time at home, per age group (for residential receptors only)
ED	=	exposure duration (years)
AT	=	averaging time period over which exposure duration is averaged (always 70 years)

The CPFs used in the assessment were obtained from OEHHA guidance. The final step converts the cancer risk in scientific notation to a whole number that expresses the cancer risk in "chances per million" by multiplying the cancer risk by a factor of $1x10^6$ (i.e., 1 million).

CARB's Hotspots Analysis and Reporting Program (HARP2) Risk Assessment Standalone Tool, Version 18159, was used to calculate the cancer risk values and is provided in Appendix C (CARB 2018a).

6.2 NON-CARCINOGENIC HAZARDS

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

The hazard index approach was used to quantify non-carcinogenic impacts. The hazard index assumes that chronic and acute sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). Target organs presented in regulatory guidance were used for each discrete chemical exposure. To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity value. This ratio is summed for compounds affecting the same toxicological endpoint. A health hazard is presumed to exist where the total equals or exceeds one (YSAQMD 2007). For the operational risk calculations, CARB's HARP2 was used to calculate the chronic health risk values and is provided in Appendix C (CARB 2018a).

7. Conclusions

This risk assessment assumed the maximum exposed receptor (i.e., a resident located approximately 800 feet to the southeast) is exposed for the entirety of operating hours (24 hours per day, 7 days per week). The HRA results are provided in Table 1. The excess cancer risk was calculated to be 1.1 per million for the maximum exposed residential receptor. In comparison to the threshold level of 10 in a million, carcinogenic risks are below the significance threshold value. For chronic non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one. Therefore, non-carcinogenic hazards are also below the significance threshold.

Table 1 Health Risk Assessment Summary

Emission Sources	Cancer Risk (Per Million)	Chronic Hazards
All Sources	1.1	0.0003
Threshold	10	1.0
Exceeds Threshold?	**No**	**No**

Source: CARB 2018a. HARP2, Risk Assessment Standalone Tool, Version 18159.

Based on a comparison to the carcinogenic and non-carcinogenic thresholds established by OEHHA and YSAQMD, hazardous air emissions generated from operation of the project are not anticipated to pose an actual or potential endangerment to the surrounding sensitive receptors, and no mitigation measures are required.

7. Conclusions

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8. References

California Air Resources Board (CARB). 2018a. Hotspots Analysis and Report Program (HARP2), Risk Assessment Standalone Tool (RAST), Version 18159.

———. 2018b. *EMFAC2017: Calculating Emission Inventories for Vehicles in California.*

———. 2009–2013. Meteorological Data Set for Davis Meteorological Station. Accessed January 9, 2019. https://www.arb.ca.gov/toxics/harp/metfiles2.htm.

———. 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.*

Lakes Environmental. 2018. AERMOD View, 9.6.5.

Office of Environmental Health Hazard Assessment (OEHHA). 2015, February. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments.*

United States Environmental Protection Agency (USEPA). 2011. *Exposure Factors Handbook.* 2011 edition (final). EPA/600/R-09/052F, 2011.

_____. 2005. *Guideline on Air Quality Models* (revised). EPA-450/2-78-027R.

Yolo-Solano Air Quality Management District (YSAQMD). 2007, July 11. *Handbook for Assessing and Mitigating Air Quality Impacts.*

8. References

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Appendix A. Emission Rate Calculations

Appendix

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Source: Onsite
Diesel Trucks
Dixon Warehouse
Dixon, CA
Full Buildout

Operation: Truck Activity, for Operational HRA

	hours	days	weeks
Temporal Profile:	24	7	52
	0	0	0

Truck Activity:

Heavy-Heavy Duty Trucks	106	trucks per day (PlaceWorks, 2018)
On-site Distance Traveled/Truck	0.75	miles
Idling Duration	15	min
Truck Bays	126	

Running Emissions: (1)

Heavy-Heavy Duty Trucks	
DPM Emission Factor (g/mi)	0.1216
DPM Running Emissions (g/sec)	1.12E-04
Total DPM Running Emissions (g/s)	**1.12E-04**

Idling Emissions: (2)

Heavy-Heavy Duty Trucks	
DPM Emission Factor (g/hr)	0.0256
Idling Emissions (g/sec)	7.86E-06
Idling Emissions (g/sec/bay)	6.24E-08
Total DPM Idling Emissions (g/s/bay)	**6.24E-08**

Point Source Specifications (vertical release): (3)

Stack Temperature	366	K
Stack Velocity	51.7	m/s
Stack Diameter	4.0	inches
Stack Height	4.15	m

(1) For DPM, PM10 running emission factors for diesel-fueled trucks obtained from CARB (EMFAC2017, Version 1.0.2) for analysis years 2020. Based upon an average lot travel speed of 5 mph.

(2) For DPM, PM10 idling emission factors for diesel-fueled trucks obtained from CARB (EMFAC2017, Version 1.0.2) for analysis year 2020.

(3) Stack parameters for idling trucks from CARB's Risk Characterization Scenarios, Appendix VII for idling diesel trucks (October 2000).

Source: Off-Site Truck Route
Diesel Trucks
Dixon Warehouse
Dixon, CA
Full Buildout

Operation: Truck Activity, for Operational HRA

	hours	days	weeks	
Temporal Profile:	24	7	52	
	0	0	0	

Truck Activity:

Heavy-Heavy Duty Trucks	106	trucks per day (PlaceWorks, 2018)
On-site Distance Traveled/Truck	1.45	miles

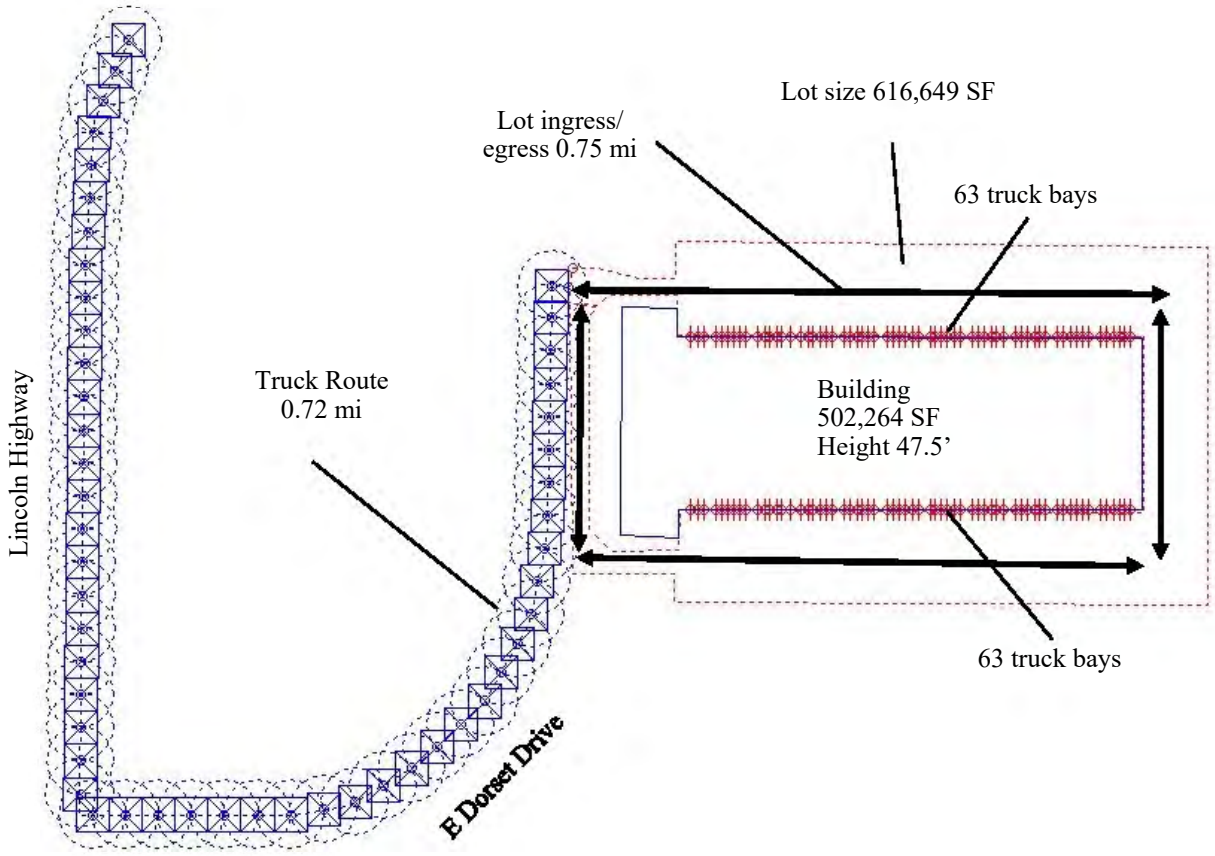
Running Emissions: (1)

Heavy-Heavy Duty Trucks	
DPM Emission Factor (g/mi)	0.0463
DPM Running Emissions (g/sec)	**8.23E-05**

(1) For DPM, PM10 running emission factors for diesel-fueled trucks obtained from CARB (EMFAC2017, Version 1.0.2) for analysis year 2020. Based upon an average lot travel speed of 45 mph.

Scannell Properties Warehouse
Dixon, CA 95620
Operation 24 hours per day, 7 days per week

Trucking Operations
Heavy-Heavy Duty Trucks: 106 trucks per day



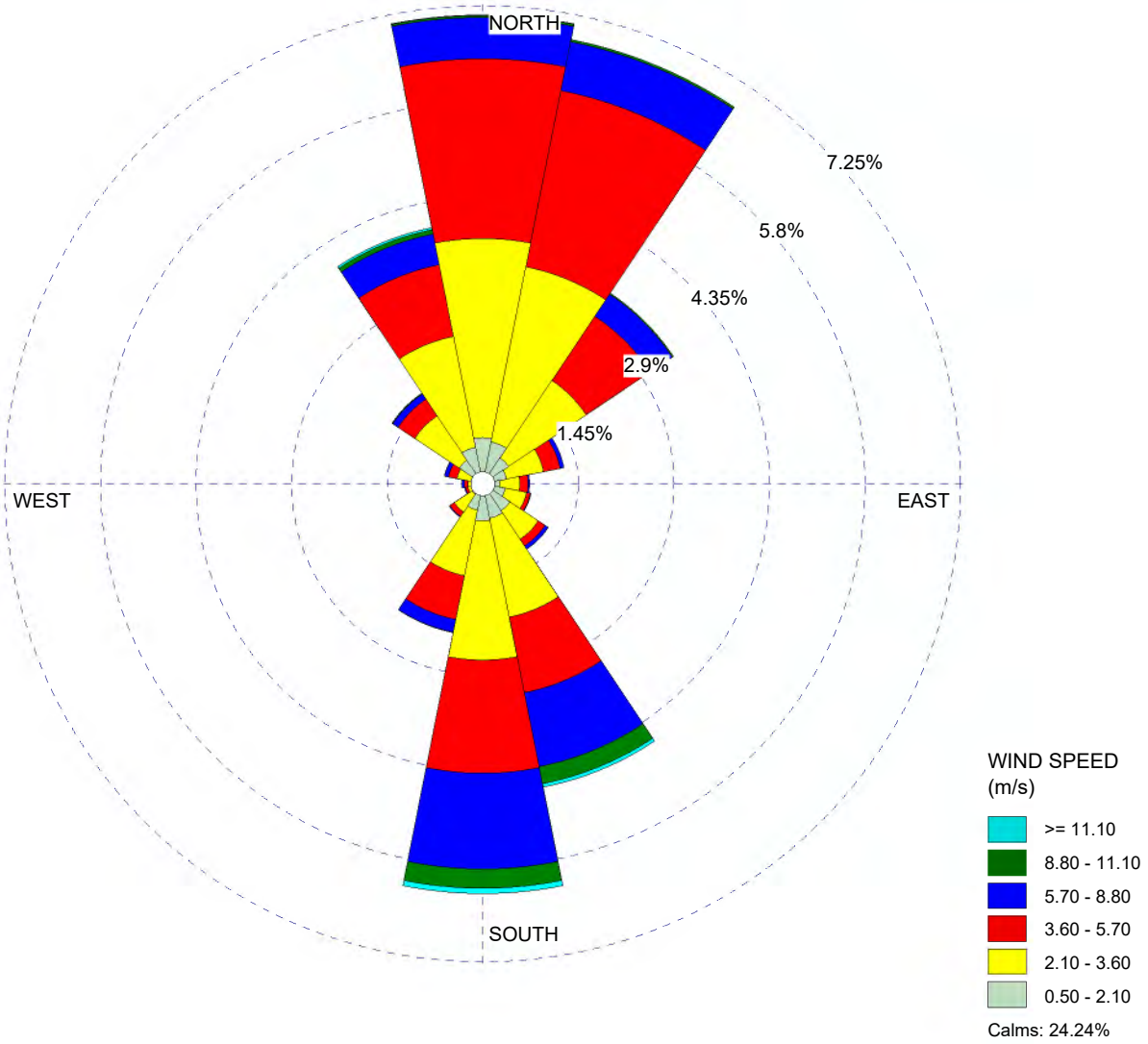
- Release height of 4.15 m and initial vertical dimension (δy) of 1.93 m is based upon California Air Resources Board's "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" (2000).

WIND ROSE PLOT:

Davis Meteorological Station
2009-13

DISPLAY:

Wind Speed
Flow Vector (blowing to)



COMMENTS: All Hours	DATA PERIOD: **Start Date: 1/2/2009 - 01:00** **End Date: 1/2/2014 - 23:59**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **24.24%**	TOTAL COUNT: **28989 hrs.**	
	AVG. WIND SPEED: **2.27 m/s**	DATE: **1/14/2019**	PROJECT NO.: **DXN-01.0**

Appendix B. Air Dispersion Model Output

Appendix

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Output Summary
Unit Emission Rates (1 g/s)

Results Summary

C:\Users\jvang\Desktop\HRA\DXN-01\DXN01\DXN01.isc

Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		278.41593	ug/m^3	603624.71	4258420.43	18.29	0.00	18.29	

MER Location

Concentration - Source Group: AREA On-site Travel

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		9.70455	ug/m^3	603624.71	4258420.43	18.29	0.00	18.29	

Concentration - Source Group: IDLING at Truck Bays

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		266.52941	ug/m^3	603624.71	4258420.43	18.29	0.00	18.29	

Concentration - Source Group: SLINE1 Off-site Travel

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		4.63460	ug/m^3	602579.02	4258537.31	19.51	0.00	19.51	

Model Output
Unit Emission Rates (1 g/s)

```
*** AERMOD - VERSION  18081 ***   *** C:\Users\jvang\Desktop\HRA\DXN-01\DXN01\DXN01.isc                    ***        01/08/19
*** AERMET - VERSION  14134 ***   ***                                                                     ***        15:18:35
                                                                                                                    PAGE   1
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  VectorWS

                                       ***     MODEL SETUP OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Model Is Setup For Calculation of Average CONCentration Values.

  --  DEPOSITION LOGIC  --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
**Model Uses NO WET DEPLETION.  WETDPLT  =  F

**Model Uses RURAL Dispersion Only.

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Allow FLAT/ELEV Terrain Option by Source,
           with      0 FLAT and    178 ELEV Source(s).
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Full Conversion Assumed for NO2.

**Other Options Specified:
        VECTORWS - User specifies that input wind speeds are VECTOR means
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of:  OTHER

**Model Calculates PERIOD Averages Only

**This Run Includes:    178 Source(s);       4 Source Group(s); and     375 Receptor(s)

               with:    126 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                and:     51 VOLUME source(s)
                and:      1 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with      0 line(s)


**Model Set To Continue RUNning After the Setup Testing.
```

Model Output
Unit Emission Rates (1 g/s)

```
**The AERMET Input Meteorological Data Version Date:  14134

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    21.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                 ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =      4.0 MB of RAM.

**Input Runstream File:          aermod.inp
**Output Print File:             aermod.out

**Detailed Error/Message File:   DXN01.err
**File for Summary of Results:   DXN01.sum
```

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/ HOR	EMIS RATE SCALAR VARY BY
STCK1	0	0.10000E+01	603150.5	4258868.3	19.4	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK2	0	0.10000E+01	603155.0	4258868.3	19.4	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK3	0	0.10000E+01	603159.4	4258868.3	19.3	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK4	0	0.10000E+01	603168.0	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK5	0	0.10000E+01	603171.8	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK6	0	0.10000E+01	603176.3	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK7	0	0.10000E+01	603180.1	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK8	0	0.10000E+01	603184.2	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK9	0	0.10000E+01	603189.0	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK10	0	0.10000E+01	603196.9	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK11	0	0.10000E+01	603201.7	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK12	0	0.10000E+01	603205.2	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK13	0	0.10000E+01	603210.0	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK14	0	0.10000E+01	603213.4	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK15	0	0.10000E+01	603219.3	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK16	0	0.10000E+01	603226.5	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK17	0	0.10000E+01	603231.7	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK18	0	0.10000E+01	603235.4	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK19	0	0.10000E+01	603240.2	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK20	0	0.10000E+01	603244.0	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK21	0	0.10000E+01	603248.9	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK22	0	0.10000E+01	603256.8	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK23	0	0.10000E+01	603261.6	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK24	0	0.10000E+01	603266.1	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK25	0	0.10000E+01	603269.8	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK26	0	0.10000E+01	603274.0	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK27	0	0.10000E+01	603278.1	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK28	0	0.10000E+01	603287.0	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK29	0	0.10000E+01	603290.8	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK30	0	0.10000E+01	603295.3	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK31	0	0.10000E+01	603299.8	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK32	0	0.10000E+01	603304.2	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK33	0	0.10000E+01	603308.4	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK34	0	0.10000E+01	603316.6	4258868.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK35	0	0.10000E+01	603320.4	4258868.3	19.1	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK36	0	0.10000E+01	603324.9	4258868.3	19.1	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK37	0	0.10000E+01	603329.0	4258868.3	19.1	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK38	0	0.10000E+01	603333.5	4258868.3	19.1	4.15	366.00	51.71	0.10	YES	NO	NO	

Model Output
Unit Emission Rates (1 g/s)

STCK39	0	0.10000E+01	603337.6	4258868.3	19.0	4.15	366.00	51.71	0.10	YES	NO	NO
STCK40	0	0.10000E+01	603346.2	4258868.3	19.0	4.15	366.00	51.71	0.10	YES	NO	NO
STCK41	0	0.10000E+01	603350.0	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK42	0	0.10000E+01	603354.5	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK43	0	0.10000E+01	603359.3	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK44	0	0.10000E+01	603363.1	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK45	0	0.10000E+01	603367.9	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK46	0	0.10000E+01	603375.8	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK47	0	0.10000E+01	603380.2	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK48	0	0.10000E+01	603384.7	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK49	0	0.10000E+01	603389.2	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK50	0	0.10000E+01	603392.6	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK51	0	0.10000E+01	603397.1	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK52	0	0.10000E+01	603405.7	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK53	0	0.10000E+01	603409.8	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK54	0	0.10000E+01	603414.3	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK55	0	0.10000E+01	603418.8	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK56	0	0.10000E+01	603422.9	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK57	0	0.10000E+01	603427.4	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK58	0	0.10000E+01	603435.3	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK59	0	0.10000E+01	603439.8	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK60	0	0.10000E+01	603444.2	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK61	0	0.10000E+01	603448.4	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK62	0	0.10000E+01	603452.1	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK63	0	0.10000E+01	603456.3	4258868.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK64	0	0.10000E+01	603150.5	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK65	0	0.10000E+01	603155.0	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK66	0	0.10000E+01	603159.4	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK67	0	0.10000E+01	603168.0	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK68	0	0.10000E+01	603171.8	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK69	0	0.10000E+01	603176.3	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK70	0	0.10000E+01	603180.1	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK71	0	0.10000E+01	603184.2	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK72	0	0.10000E+01	603189.0	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK73	0	0.10000E+01	603196.9	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK74	0	0.10000E+01	603201.7	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK75	0	0.10000E+01	603205.2	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK76	0	0.10000E+01	603210.0	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK77	0	0.10000E+01	603213.4	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK78	0	0.10000E+01	603219.3	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK79	0	0.10000E+01	603226.5	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO
STCK80	0	0.10000E+01	603231.7	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/ HOR	EMIS RATE SCALAR VARY BY
STCK81	0	0.10000E+01	603235.4	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK82	0	0.10000E+01	603240.2	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK83	0	0.10000E+01	603244.0	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK84	0	0.10000E+01	603248.9	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK85	0	0.10000E+01	603256.8	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK86	0	0.10000E+01	603261.6	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK87	0	0.10000E+01	603266.1	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK88	0	0.10000E+01	603269.8	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK89	0	0.10000E+01	603274.0	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK90	0	0.10000E+01	603278.1	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK91	0	0.10000E+01	603287.0	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK92	0	0.10000E+01	603290.8	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK93	0	0.10000E+01	603295.3	4258748.3	19.2	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK94	0	0.10000E+01	603299.8	4258748.3	19.1	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK95	0	0.10000E+01	603304.2	4258748.3	19.1	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK96	0	0.10000E+01	603308.4	4258748.3	19.1	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK97	0	0.10000E+01	603316.6	4258748.3	19.0	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK98	0	0.10000E+01	603320.4	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK99	0	0.10000E+01	603324.9	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK100	0	0.10000E+01	603329.0	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK101	0	0.10000E+01	603333.5	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK102	0	0.10000E+01	603337.6	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK103	0	0.10000E+01	603346.2	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK104	0	0.10000E+01	603350.0	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK105	0	0.10000E+01	603354.5	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK106	0	0.10000E+01	603359.3	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK107	0	0.10000E+01	603363.1	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK108	0	0.10000E+01	603367.9	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK109	0	0.10000E+01	603375.8	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK110	0	0.10000E+01	603380.2	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK111	0	0.10000E+01	603384.7	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK112	0	0.10000E+01	603389.2	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK113	0	0.10000E+01	603392.6	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK114	0	0.10000E+01	603397.1	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK115	0	0.10000E+01	603405.7	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK116	0	0.10000E+01	603409.8	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK117	0	0.10000E+01	603414.3	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	
STCK118	0	0.10000E+01	603418.8	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO	

Model Output
Unit Emission Rates (1 g/s)

STCK119	0	0.10000E+01	603422.9	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK120	0	0.10000E+01	603427.4	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK121	0	0.10000E+01	603435.3	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK122	0	0.10000E+01	603439.8	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK123	0	0.10000E+01	603444.2	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK124	0	0.10000E+01	603448.4	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK125	0	0.10000E+01	603452.1	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO
STCK126	0	0.10000E+01	603456.3	4258748.3	18.9	4.15	366.00	51.71	0.10	YES	NO	NO

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.19608E-01	603054.2	4258904.3	19.5	4.15	10.70	1.93	NO	
L0000002	0	0.19608E-01	603053.3	4258881.9	19.5	4.15	10.70	1.93	NO	
L0000003	0	0.19608E-01	603052.9	4258858.9	19.5	4.15	10.70	1.93	NO	
L0000004	0	0.19608E-01	603052.5	4258835.9	19.5	4.15	10.70	1.93	NO	
L0000005	0	0.19608E-01	603052.1	4258812.9	19.5	4.15	10.70	1.93	NO	
L0000006	0	0.19608E-01	603051.7	4258789.9	19.5	4.15	10.70	1.93	NO	
L0000007	0	0.19608E-01	603051.3	4258766.9	19.5	4.15	10.70	1.93	NO	
L0000008	0	0.19608E-01	603050.9	4258743.9	19.5	4.15	10.70	1.93	NO	
L0000009	0	0.19608E-01	603048.5	4258721.1	19.5	4.15	10.70	1.93	NO	
L0000010	0	0.19608E-01	603043.7	4258698.6	19.5	4.15	10.70	1.93	NO	
L0000011	0	0.19608E-01	603039.0	4258676.1	19.4	4.15	10.70	1.93	NO	
L0000012	0	0.19608E-01	603029.5	4258655.4	19.4	4.15	10.70	1.93	NO	
L0000013	0	0.19608E-01	603018.3	4258635.3	19.3	4.15	10.70	1.93	NO	
L0000014	0	0.19608E-01	603007.0	4258615.3	19.3	4.15	10.70	1.93	NO	
L0000015	0	0.19608E-01	602990.8	4258599.1	19.2	4.15	10.70	1.93	NO	
L0000016	0	0.19608E-01	602974.0	4258583.4	19.2	4.15	10.70	1.93	NO	
L0000017	0	0.19608E-01	602956.5	4258568.6	19.2	4.15	10.70	1.93	NO	
L0000018	0	0.19608E-01	602936.7	4258556.9	19.2	4.15	10.70	1.93	NO	
L0000019	0	0.19608E-01	602916.9	4258545.2	19.2	4.15	10.70	1.93	NO	
L0000020	0	0.19608E-01	602894.9	4258539.7	19.2	4.15	10.70	1.93	NO	
L0000021	0	0.19608E-01	602872.1	4258536.4	19.2	4.15	10.70	1.93	NO	
L0000022	0	0.19608E-01	602849.1	4258536.4	19.2	4.15	10.70	1.93	NO	
L0000023	0	0.19608E-01	602826.1	4258536.4	19.2	4.15	10.70	1.93	NO	
L0000024	0	0.19608E-01	602803.1	4258536.4	19.3	4.15	10.70	1.93	NO	
L0000025	0	0.19608E-01	602780.1	4258536.4	19.4	4.15	10.70	1.93	NO	
L0000026	0	0.19608E-01	602757.1	4258536.4	19.5	4.15	10.70	1.93	NO	
L0000027	0	0.19608E-01	602734.1	4258536.4	19.5	4.15	10.70	1.93	NO	
L0000028	0	0.19608E-01	602725.7	4258550.8	19.5	4.15	10.70	1.93	NO	
L0000029	0	0.19608E-01	602726.0	4258573.8	19.5	4.15	10.70	1.93	NO	
L0000030	0	0.19608E-01	602726.2	4258596.8	19.5	4.15	10.70	1.93	NO	
L0000031	0	0.19608E-01	602726.4	4258619.8	19.5	4.15	10.70	1.93	NO	
L0000032	0	0.19608E-01	602726.7	4258642.8	19.5	4.15	10.70	1.93	NO	
L0000033	0	0.19608E-01	602726.9	4258665.8	19.5	4.15	10.70	1.93	NO	
L0000034	0	0.19608E-01	602727.2	4258688.8	19.5	4.15	10.70	1.93	NO	
L0000035	0	0.19608E-01	602727.4	4258711.8	19.5	4.15	10.70	1.93	NO	
L0000036	0	0.19608E-01	602727.6	4258734.8	19.5	4.15	10.70	1.93	NO	
L0000037	0	0.19608E-01	602727.9	4258757.8	19.5	4.15	10.70	1.93	NO	
L0000038	0	0.19608E-01	602728.1	4258780.8	19.5	4.15	10.70	1.93	NO	

L0000039	0	0.19608E-01	602728.4	4258803.8	19.5	4.15	10.70	1.93	NO
L0000040	0	0.19608E-01	602728.6	4258826.8	19.6	4.15	10.70	1.93	NO
L0000041	0	0.19608E-01	602728.8	4258849.8	19.8	4.15	10.70	1.93	NO
L0000042	0	0.19608E-01	602729.1	4258872.8	19.8	4.15	10.70	1.93	NO
L0000043	0	0.19608E-01	602729.3	4258895.8	19.8	4.15	10.70	1.93	NO
L0000044	0	0.19608E-01	602729.6	4258918.8	19.8	4.15	10.70	1.93	NO
L0000045	0	0.19608E-01	602731.0	4258941.7	19.8	4.15	10.70	1.93	NO
L0000046	0	0.19608E-01	602732.4	4258964.7	19.8	4.15	10.70	1.93	NO
L0000047	0	0.19608E-01	602733.9	4258987.6	19.8	4.15	10.70	1.93	NO
L0000048	0	0.19608E-01	602735.3	4259010.6	19.8	4.15	10.70	1.93	NO
L0000049	0	0.19608E-01	602741.4	4259032.5	19.8	4.15	10.70	1.93	NO
L0000050	0	0.19608E-01	602750.2	4259053.7	19.8	4.15	10.70	1.93	NO
L0000051	0	0.19608E-01	602759.1	4259074.9	19.8	4.15	10.70	1.93	NO

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
PAREA1	0	0.17456E-04	603068.6	4258916.1	19.5	4.15	24	1.93	NO	

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
IDLING	STCK1 , STCK2 , STCK3 , STCK4 , STCK5 , STCK6 , STCK7 , STCK8 ,
	STCK9 , STCK10 , STCK11 , STCK12 , STCK13 , STCK14 , STCK15 , STCK16 ,
	STCK17 , STCK18 , STCK19 , STCK20 , STCK21 , STCK22 , STCK23 , STCK24 ,
	STCK25 , STCK26 , STCK27 , STCK28 , STCK29 , STCK30 , STCK31 , STCK32 ,
	STCK33 , STCK34 , STCK35 , STCK36 , STCK37 , STCK38 , STCK39 , STCK40 ,
	STCK41 , STCK42 , STCK43 , STCK44 , STCK45 , STCK46 , STCK47 , STCK48 ,
	STCK49 , STCK50 , STCK51 , STCK52 , STCK53 , STCK54 , STCK55 , STCK56 ,
	STCK57 , STCK58 , STCK59 , STCK60 , STCK61 , STCK62 , STCK63 , STCK64 ,
	STCK65 , STCK66 , STCK67 , STCK68 , STCK69 , STCK70 , STCK71 , STCK72 ,
	STCK73 , STCK74 , STCK75 , STCK76 , STCK77 , STCK78 , STCK79 , STCK80 ,
	STCK81 , STCK82 , STCK83 , STCK84 , STCK85 , STCK86 , STCK87 , STCK88 ,
	STCK89 , STCK90 , STCK91 , STCK92 , STCK93 , STCK94 , STCK95 , STCK96 ,
	STCK97 , STCK98 , STCK99 , STCK100 , STCK101 , STCK102 , STCK103 , STCK104 ,
	STCK105 , STCK106 , STCK107 , STCK108 , STCK109 , STCK110 , STCK111 , STCK112 ,
	STCK113 , STCK114 , STCK115 , STCK116 , STCK117 , STCK118 , STCK119 , STCK120 ,
	STCK121 , STCK122 , STCK123 , STCK124 , STCK125 , STCK126 ,
AREA	PAREA1 ,
SLINE1	L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 ,
	L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 ,
	L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 ,

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 , L0000032 ,
	L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 , L0000040 ,
	L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 , L0000048 ,
	L0000049 , L0000050 , L0000051 ,
ALL	STCK1 , STCK2 , STCK3 , STCK4 , STCK5 , STCK6 , STCK7 , STCK8 ,
	STCK9 , STCK10 , STCK11 , STCK12 , STCK13 , STCK14 , STCK15 , STCK16 ,
	STCK17 , STCK18 , STCK19 , STCK20 , STCK21 , STCK22 , STCK23 , STCK24 ,
	STCK25 , STCK26 , STCK27 , STCK28 , STCK29 , STCK30 , STCK31 , STCK32 ,
	STCK33 , STCK34 , STCK35 , STCK36 , STCK37 , STCK38 , STCK39 , STCK40 ,
	STCK41 , STCK42 , STCK43 , STCK44 , STCK45 , STCK46 , STCK47 , STCK48 ,
	STCK49 , STCK50 , STCK51 , STCK52 , STCK53 , STCK54 , STCK55 , STCK56 ,
	STCK57 , STCK58 , STCK59 , STCK60 , STCK61 , STCK62 , STCK63 , STCK64 ,
	STCK65 , STCK66 , STCK67 , STCK68 , STCK69 , STCK70 , STCK71 , STCK72 ,
	STCK73 , STCK74 , STCK75 , STCK76 , STCK77 , STCK78 , STCK79 , STCK80 ,
	STCK81 , STCK82 , STCK83 , STCK84 , STCK85 , STCK86 , STCK87 , STCK88 ,
	STCK89 , STCK90 , STCK91 , STCK92 , STCK93 , STCK94 , STCK95 , STCK96 ,
	STCK97 , STCK98 , STCK99 , STCK100 , STCK101 , STCK102 , STCK103 , STCK104 ,
	STCK105 , STCK106 , STCK107 , STCK108 , STCK109 , STCK110 , STCK111 , STCK112 ,
	STCK113 , STCK114 , STCK115 , STCK116 , STCK117 , STCK118 , STCK119 , STCK120 ,
	STCK121 , STCK122 , STCK123 , STCK124 , STCK125 , STCK126 , PAREA1 , L0000001 ,
	L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 ,
	L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 ,
	L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 ,
	L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 , L0000032 , L0000033 ,
	L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 , L0000040 , L0000041 ,
	L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 , L0000048 , L0000049 ,
	L0000050 , L0000051 ,

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(	603660.1,	4258511.6,	18.3,	18.3,	0.0);	(603665.5,	4258502.0,	18.3,	18.3,	0.0);
(	603660.1,	4258489.1,	18.3,	18.3,	0.0);	(603638.7,	4258471.9,	18.3,	18.3,	0.0);
(	603658.0,	4258431.2,	18.3,	18.3,	0.0);	(603624.7,	4258420.4,	18.3,	18.3,	0.0);
(	603659.0,	4258405.4,	18.3,	18.3,	0.0);	(603650.5,	4258392.5,	18.3,	18.3,	0.0);
(	603640.8,	4258371.1,	18.3,	18.3,	0.0);	(602469.0,	4258357.3,	19.5,	19.5,	0.0);
(	602479.0,	4258357.3,	19.5,	19.5,	0.0);	(602489.0,	4258357.3,	19.5,	19.5,	0.0);
(	602499.0,	4258357.3,	19.5,	19.5,	0.0);	(602509.0,	4258357.3,	19.5,	19.5,	0.0);
(	602519.0,	4258357.3,	19.5,	19.5,	0.0);	(602529.0,	4258357.3,	19.5,	19.5,	0.0);
(	602539.0,	4258357.3,	19.5,	19.5,	0.0);	(602549.0,	4258357.3,	19.5,	19.5,	0.0);
(	602559.0,	4258357.3,	19.5,	19.5,	0.0);	(602569.0,	4258357.3,	19.5,	19.5,	0.0);
(	602579.0,	4258357.3,	19.5,	19.5,	0.0);	(602469.0,	4258367.3,	19.5,	19.5,	0.0);
(	602479.0,	4258367.3,	19.5,	19.5,	0.0);	(602489.0,	4258367.3,	19.5,	19.5,	0.0);
(	602499.0,	4258367.3,	19.5,	19.5,	0.0);	(602509.0,	4258367.3,	19.5,	19.5,	0.0);
(	602519.0,	4258367.3,	19.5,	19.5,	0.0);	(602529.0,	4258367.3,	19.5,	19.5,	0.0);
(	602539.0,	4258367.3,	19.5,	19.5,	0.0);	(602549.0,	4258367.3,	19.5,	19.5,	0.0);
(	602559.0,	4258367.3,	19.5,	19.5,	0.0);	(602569.0,	4258367.3,	19.5,	19.5,	0.0);
(	602579.0,	4258367.3,	19.5,	19.5,	0.0);	(602469.0,	4258377.3,	19.5,	19.5,	0.0);
(	602479.0,	4258377.3,	19.5,	19.5,	0.0);	(602489.0,	4258377.3,	19.5,	19.5,	0.0);
(	602499.0,	4258377.3,	19.5,	19.5,	0.0);	(602509.0,	4258377.3,	19.5,	19.5,	0.0);
(	602519.0,	4258377.3,	19.5,	19.5,	0.0);	(602529.0,	4258377.3,	19.5,	19.5,	0.0);
(	602539.0,	4258377.3,	19.5,	19.5,	0.0);	(602549.0,	4258377.3,	19.5,	19.5,	0.0);
(	602559.0,	4258377.3,	19.5,	19.5,	0.0);	(602569.0,	4258377.3,	19.5,	19.5,	0.0);
(	602579.0,	4258377.3,	19.5,	19.5,	0.0);	(602469.0,	4258387.3,	19.5,	19.5,	0.0);
(	602479.0,	4258387.3,	19.5,	19.5,	0.0);	(602489.0,	4258387.3,	19.5,	19.5,	0.0);
(	602499.0,	4258387.3,	19.5,	19.5,	0.0);	(602509.0,	4258387.3,	19.5,	19.5,	0.0);
(	602519.0,	4258387.3,	19.5,	19.5,	0.0);	(602529.0,	4258387.3,	19.5,	19.5,	0.0);
(	602539.0,	4258387.3,	19.5,	19.5,	0.0);	(602549.0,	4258387.3,	19.5,	19.5,	0.0);
(	602559.0,	4258387.3,	19.5,	19.5,	0.0);	(602569.0,	4258387.3,	19.5,	19.5,	0.0);
(	602579.0,	4258387.3,	19.5,	19.5,	0.0);	(602559.0,	4258397.3,	19.5,	19.5,	0.0);
(	602569.0,	4258397.3,	19.5,	19.5,	0.0);	(602579.0,	4258397.3,	19.5,	19.5,	0.0);
(	602469.0,	4258407.3,	19.5,	19.5,	0.0);	(602479.0,	4258407.3,	19.5,	19.5,	0.0);
(	602489.0,	4258407.3,	19.5,	19.5,	0.0);	(602499.0,	4258407.3,	19.5,	19.5,	0.0);
(	602509.0,	4258407.3,	19.5,	19.5,	0.0);	(602519.0,	4258407.3,	19.5,	19.5,	0.0);
(	602529.0,	4258407.3,	19.5,	19.5,	0.0);	(602539.0,	4258407.3,	19.5,	19.5,	0.0);
(	602549.0,	4258407.3,	19.5,	19.5,	0.0);	(602559.0,	4258407.3,	19.5,	19.5,	0.0);
(	602569.0,	4258407.3,	19.5,	19.5,	0.0);	(602579.0,	4258407.3,	19.5,	19.5,	0.0);
(	602469.0,	4258417.3,	19.5,	19.5,	0.0);	(602479.0,	4258417.3,	19.5,	19.5,	0.0);
(	602489.0,	4258417.3,	19.5,	19.5,	0.0);	(602499.0,	4258417.3,	19.5,	19.5,	0.0);
(	602509.0,	4258417.3,	19.5,	19.5,	0.0);	(602519.0,	4258417.3,	19.5,	19.5,	0.0);
(	602529.0,	4258417.3,	19.5,	19.5,	0.0);	(602539.0,	4258417.3,	19.5,	19.5,	0.0);
(	602549.0,	4258417.3,	19.5,	19.5,	0.0);	(602559.0,	4258417.3,	19.5,	19.5,	0.0);
(	602569.0,	4258417.3,	19.5,	19.5,	0.0);	(602579.0,	4258417.3,	19.5,	19.5,	0.0);

Model Output
Unit Emission Rates (1 g/s)

```
( 602469.0, 4258427.3,      19.5,      19.5,       0.0);        ( 602479.0, 4258427.3,      19.5,      19.5,       0.0);
( 602489.0, 4258427.3,      19.5,      19.5,       0.0);        ( 602499.0, 4258427.3,      19.5,      19.5,       0.0);
( 602509.0, 4258427.3,      19.5,      19.5,       0.0);        ( 602519.0, 4258427.3,      19.5,      19.5,       0.0);
( 602529.0, 4258427.3,      19.5,      19.5,       0.0);        ( 602539.0, 4258427.3,      19.5,      19.5,       0.0);
( 602549.0, 4258427.3,      19.5,      19.5,       0.0);        ( 602559.0, 4258427.3,      19.5,      19.5,       0.0);
( 602569.0, 4258427.3,      19.5,      19.5,       0.0);        ( 602579.0, 4258427.3,      19.5,      19.5,       0.0);
( 602469.0, 4258437.3,      19.5,      19.5,       0.0);        ( 602479.0, 4258437.3,      19.5,      19.5,       0.0);
( 602489.0, 4258437.3,      19.5,      19.5,       0.0);        ( 602499.0, 4258437.3,      19.5,      19.5,       0.0);
( 602509.0, 4258437.3,      19.5,      19.5,       0.0);        ( 602519.0, 4258437.3,      19.5,      19.5,       0.0);
( 602529.0, 4258437.3,      19.5,      19.5,       0.0);        ( 602539.0, 4258437.3,      19.5,      19.5,       0.0);
( 602549.0, 4258437.3,      19.5,      19.5,       0.0);        ( 602559.0, 4258437.3,      19.5,      19.5,       0.0);
( 602569.0, 4258437.3,      19.5,      19.5,       0.0);        ( 602579.0, 4258437.3,      19.5,      19.5,       0.0);
( 602469.0, 4258447.3,      19.5,      19.5,       0.0);        ( 602479.0, 4258447.3,      19.5,      19.5,       0.0);
( 602489.0, 4258447.3,      19.5,      19.5,       0.0);        ( 602499.0, 4258447.3,      19.5,      19.5,       0.0);
( 602509.0, 4258447.3,      19.5,      19.5,       0.0);        ( 602519.0, 4258447.3,      19.5,      19.5,       0.0);
( 602529.0, 4258447.3,      19.5,      19.5,       0.0);        ( 602539.0, 4258447.3,      19.5,      19.5,       0.0);
( 602549.0, 4258447.3,      19.5,      19.5,       0.0);        ( 602559.0, 4258447.3,      19.5,      19.5,       0.0);
( 602569.0, 4258447.3,      19.5,      19.5,       0.0);        ( 602579.0, 4258447.3,      19.5,      19.5,       0.0);
( 602469.0, 4258457.3,      19.5,      19.5,       0.0);        ( 602479.0, 4258457.3,      19.5,      19.5,       0.0);
( 602489.0, 4258457.3,      19.5,      19.5,       0.0);        ( 602499.0, 4258457.3,      19.5,      19.5,       0.0);
( 602509.0, 4258457.3,      19.5,      19.5,       0.0);        ( 602519.0, 4258457.3,      19.5,      19.5,       0.0);
( 602529.0, 4258457.3,      19.5,      19.5,       0.0);        ( 602539.0, 4258457.3,      19.5,      19.5,       0.0);
( 602549.0, 4258457.3,      19.5,      19.5,       0.0);        ( 602559.0, 4258457.3,      19.5,      19.5,       0.0);
( 602569.0, 4258457.3,      19.5,      19.5,       0.0);        ( 602579.0, 4258457.3,      19.5,      19.5,       0.0);
( 602469.0, 4258467.3,      19.6,      19.6,       0.0);        ( 602479.0, 4258467.3,      19.5,      19.5,       0.0);
( 602489.0, 4258467.3,      19.5,      19.5,       0.0);        ( 602499.0, 4258467.3,      19.5,      19.5,       0.0);
( 602509.0, 4258467.3,      19.5,      19.5,       0.0);        ( 602519.0, 4258467.3,      19.5,      19.5,       0.0);
( 602529.0, 4258467.3,      19.5,      19.5,       0.0);        ( 602539.0, 4258467.3,      19.5,      19.5,       0.0);
( 602549.0, 4258467.3,      19.5,      19.5,       0.0);        ( 602559.0, 4258467.3,      19.5,      19.5,       0.0);
( 602569.0, 4258467.3,      19.5,      19.5,       0.0);        ( 602579.0, 4258467.3,      19.5,      19.5,       0.0);
( 602569.0, 4258477.3,      19.5,      19.5,       0.0);        ( 602579.0, 4258477.3,      19.5,      19.5,       0.0);
( 602469.0, 4258497.3,      19.7,      19.7,       0.0);        ( 602479.0, 4258497.3,      19.7,      19.7,       0.0);
( 602489.0, 4258497.3,      19.6,      19.6,       0.0);        ( 602499.0, 4258497.3,      19.6,      19.6,       0.0);
( 602509.0, 4258497.3,      19.5,      19.5,       0.0);        ( 602519.0, 4258497.3,      19.5,      19.5,       0.0);
( 602529.0, 4258497.3,      19.5,      19.5,       0.0);        ( 602539.0, 4258497.3,      19.5,      19.5,       0.0);
( 602549.0, 4258497.3,      19.5,      19.5,       0.0);        ( 602559.0, 4258497.3,      19.5,      19.5,       0.0);
( 602569.0, 4258497.3,      19.5,      19.5,       0.0);        ( 602579.0, 4258497.3,      19.5,      19.5,       0.0);
( 602469.0, 4258507.3,      19.8,      19.8,       0.0);        ( 602479.0, 4258507.3,      19.7,      19.7,       0.0);
( 602489.0, 4258507.3,      19.7,      19.7,       0.0);        ( 602499.0, 4258507.3,      19.6,      19.6,       0.0);
( 602509.0, 4258507.3,      19.5,      19.5,       0.0);        ( 602519.0, 4258507.3,      19.5,      19.5,       0.0);
( 602529.0, 4258507.3,      19.5,      19.5,       0.0);        ( 602539.0, 4258507.3,      19.5,      19.5,       0.0);
( 602549.0, 4258507.3,      19.5,      19.5,       0.0);        ( 602559.0, 4258507.3,      19.5,      19.5,       0.0);
( 602569.0, 4258507.3,      19.5,      19.5,       0.0);        ( 602579.0, 4258507.3,      19.5,      19.5,       0.0);
( 602469.0, 4258517.3,      19.8,      19.8,       0.0);        ( 602479.0, 4258517.3,      19.8,      19.8,       0.0);
( 602489.0, 4258517.3,      19.8,      19.8,       0.0);        ( 602499.0, 4258517.3,      19.7,      19.7,       0.0);
( 602509.0, 4258517.3,      19.6,      19.6,       0.0);        ( 602519.0, 4258517.3,      19.5,      19.5,       0.0);
( 602529.0, 4258517.3,      19.5,      19.5,       0.0);        ( 602539.0, 4258517.3,      19.5,      19.5,       0.0);
( 602549.0, 4258517.3,      19.5,      19.5,       0.0);        ( 602559.0, 4258517.3,      19.5,      19.5,       0.0);
```

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(	602569.0,	4258517.3,	19.5,	19.5,	0.0);	(602579.0,	4258517.3,	19.5,	19.5,	0.0);
(	602529.0,	4258527.3,	19.5,	19.5,	0.0);	(602539.0,	4258527.3,	19.5,	19.5,	0.0);
(	602549.0,	4258527.3,	19.5,	19.5,	0.0);	(602559.0,	4258527.3,	19.5,	19.5,	0.0);
(	602569.0,	4258527.3,	19.5,	19.5,	0.0);	(602579.0,	4258527.3,	19.5,	19.5,	0.0);
(	602549.0,	4258537.3,	19.5,	19.5,	0.0);	(602559.0,	4258537.3,	19.5,	19.5,	0.0);
(	602569.0,	4258537.3,	19.5,	19.5,	0.0);	(602579.0,	4258537.3,	19.5,	19.5,	0.0);
(	602469.0,	4258357.3,	19.5,	19.5,	6.1);	(602479.0,	4258357.3,	19.5,	19.5,	6.1);
(	602489.0,	4258357.3,	19.5,	19.5,	6.1);	(602499.0,	4258357.3,	19.5,	19.5,	6.1);
(	602509.0,	4258357.3,	19.5,	19.5,	6.1);	(602519.0,	4258357.3,	19.5,	19.5,	6.1);
(	602529.0,	4258357.3,	19.5,	19.5,	6.1);	(602539.0,	4258357.3,	19.5,	19.5,	6.1);
(	602549.0,	4258357.3,	19.5,	19.5,	6.1);	(602559.0,	4258357.3,	19.5,	19.5,	6.1);
(	602569.0,	4258357.3,	19.5,	19.5,	6.1);	(602579.0,	4258357.3,	19.5,	19.5,	6.1);
(	602469.0,	4258367.3,	19.5,	19.5,	6.1);	(602479.0,	4258367.3,	19.5,	19.5,	6.1);
(	602489.0,	4258367.3,	19.5,	19.5,	6.1);	(602499.0,	4258367.3,	19.5,	19.5,	6.1);
(	602509.0,	4258367.3,	19.5,	19.5,	6.1);	(602519.0,	4258367.3,	19.5,	19.5,	6.1);
(	602529.0,	4258367.3,	19.5,	19.5,	6.1);	(602539.0,	4258367.3,	19.5,	19.5,	6.1);
(	602549.0,	4258367.3,	19.5,	19.5,	6.1);	(602559.0,	4258367.3,	19.5,	19.5,	6.1);
(	602569.0,	4258367.3,	19.5,	19.5,	6.1);	(602579.0,	4258367.3,	19.5,	19.5,	6.1);
(	602469.0,	4258377.3,	19.5,	19.5,	6.1);	(602479.0,	4258377.3,	19.5,	19.5,	6.1);
(	602489.0,	4258377.3,	19.5,	19.5,	6.1);	(602499.0,	4258377.3,	19.5,	19.5,	6.1);
(	602509.0,	4258377.3,	19.5,	19.5,	6.1);	(602519.0,	4258377.3,	19.5,	19.5,	6.1);
(	602529.0,	4258377.3,	19.5,	19.5,	6.1);	(602539.0,	4258377.3,	19.5,	19.5,	6.1);
(	602549.0,	4258377.3,	19.5,	19.5,	6.1);	(602559.0,	4258377.3,	19.5,	19.5,	6.1);
(	602569.0,	4258377.3,	19.5,	19.5,	6.1);	(602579.0,	4258377.3,	19.5,	19.5,	6.1);
(	602469.0,	4258387.3,	19.5,	19.5,	6.1);	(602479.0,	4258387.3,	19.5,	19.5,	6.1);
(	602489.0,	4258387.3,	19.5,	19.5,	6.1);	(602499.0,	4258387.3,	19.5,	19.5,	6.1);
(	602509.0,	4258387.3,	19.5,	19.5,	6.1);	(602519.0,	4258387.3,	19.5,	19.5,	6.1);
(	602529.0,	4258387.3,	19.5,	19.5,	6.1);	(602539.0,	4258387.3,	19.5,	19.5,	6.1);
(	602549.0,	4258387.3,	19.5,	19.5,	6.1);	(602559.0,	4258387.3,	19.5,	19.5,	6.1);
(	602569.0,	4258387.3,	19.5,	19.5,	6.1);	(602579.0,	4258387.3,	19.5,	19.5,	6.1);
(	602559.0,	4258397.3,	19.5,	19.5,	6.1);	(602569.0,	4258397.3,	19.5,	19.5,	6.1);
(	602579.0,	4258397.3,	19.5,	19.5,	6.1);	(602469.0,	4258407.3,	19.5,	19.5,	6.1);
(	602479.0,	4258407.3,	19.5,	19.5,	6.1);	(602489.0,	4258407.3,	19.5,	19.5,	6.1);
(	602499.0,	4258407.3,	19.5,	19.5,	6.1);	(602509.0,	4258407.3,	19.5,	19.5,	6.1);
(	602519.0,	4258407.3,	19.5,	19.5,	6.1);	(602529.0,	4258407.3,	19.5,	19.5,	6.1);
(	602539.0,	4258407.3,	19.5,	19.5,	6.1);	(602549.0,	4258407.3,	19.5,	19.5,	6.1);
(	602559.0,	4258407.3,	19.5,	19.5,	6.1);	(602569.0,	4258407.3,	19.5,	19.5,	6.1);
(	602579.0,	4258407.3,	19.5,	19.5,	6.1);	(602469.0,	4258417.3,	19.5,	19.5,	6.1);
(	602479.0,	4258417.3,	19.5,	19.5,	6.1);	(602489.0,	4258417.3,	19.5,	19.5,	6.1);
(	602499.0,	4258417.3,	19.5,	19.5,	6.1);	(602509.0,	4258417.3,	19.5,	19.5,	6.1);
(	602519.0,	4258417.3,	19.5,	19.5,	6.1);	(602529.0,	4258417.3,	19.5,	19.5,	6.1);
(	602539.0,	4258417.3,	19.5,	19.5,	6.1);	(602549.0,	4258417.3,	19.5,	19.5,	6.1);

Model Output
Unit Emission Rates (1 g/s)

```
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( 602479.0, 4258427.3,      19.5,      19.5,      6.1);        ( 602489.0, 4258427.3,      19.5,      19.5,      6.1);
( 602499.0, 4258427.3,      19.5,      19.5,      6.1);        ( 602509.0, 4258427.3,      19.5,      19.5,      6.1);
( 602519.0, 4258427.3,      19.5,      19.5,      6.1);        ( 602529.0, 4258427.3,      19.5,      19.5,      6.1);
( 602539.0, 4258427.3,      19.5,      19.5,      6.1);        ( 602549.0, 4258427.3,      19.5,      19.5,      6.1);
( 602559.0, 4258427.3,      19.5,      19.5,      6.1);        ( 602569.0, 4258427.3,      19.5,      19.5,      6.1);
( 602579.0, 4258427.3,      19.5,      19.5,      6.1);        ( 602469.0, 4258437.3,      19.5,      19.5,      6.1);
( 602479.0, 4258437.3,      19.5,      19.5,      6.1);        ( 602489.0, 4258437.3,      19.5,      19.5,      6.1);
( 602499.0, 4258437.3,      19.5,      19.5,      6.1);        ( 602509.0, 4258437.3,      19.5,      19.5,      6.1);
( 602519.0, 4258437.3,      19.5,      19.5,      6.1);        ( 602529.0, 4258437.3,      19.5,      19.5,      6.1);
( 602539.0, 4258437.3,      19.5,      19.5,      6.1);        ( 602549.0, 4258437.3,      19.5,      19.5,      6.1);
( 602559.0, 4258437.3,      19.5,      19.5,      6.1);        ( 602569.0, 4258437.3,      19.5,      19.5,      6.1);
( 602579.0, 4258437.3,      19.5,      19.5,      6.1);        ( 602469.0, 4258447.3,      19.5,      19.5,      6.1);
( 602479.0, 4258447.3,      19.5,      19.5,      6.1);        ( 602489.0, 4258447.3,      19.5,      19.5,      6.1);
( 602499.0, 4258447.3,      19.5,      19.5,      6.1);        ( 602509.0, 4258447.3,      19.5,      19.5,      6.1);
( 602519.0, 4258447.3,      19.5,      19.5,      6.1);        ( 602529.0, 4258447.3,      19.5,      19.5,      6.1);
( 602539.0, 4258447.3,      19.5,      19.5,      6.1);        ( 602549.0, 4258447.3,      19.5,      19.5,      6.1);
( 602559.0, 4258447.3,      19.5,      19.5,      6.1);        ( 602569.0, 4258447.3,      19.5,      19.5,      6.1);
( 602579.0, 4258447.3,      19.5,      19.5,      6.1);        ( 602469.0, 4258457.3,      19.5,      19.5,      6.1);
( 602479.0, 4258457.3,      19.5,      19.5,      6.1);        ( 602489.0, 4258457.3,      19.5,      19.5,      6.1);
( 602499.0, 4258457.3,      19.5,      19.5,      6.1);        ( 602509.0, 4258457.3,      19.5,      19.5,      6.1);
( 602519.0, 4258457.3,      19.5,      19.5,      6.1);        ( 602529.0, 4258457.3,      19.5,      19.5,      6.1);
( 602539.0, 4258457.3,      19.5,      19.5,      6.1);        ( 602549.0, 4258457.3,      19.5,      19.5,      6.1);
( 602559.0, 4258457.3,      19.5,      19.5,      6.1);        ( 602569.0, 4258457.3,      19.5,      19.5,      6.1);
( 602579.0, 4258457.3,      19.5,      19.5,      6.1);        ( 602469.0, 4258467.3,      19.6,      19.6,      6.1);
( 602479.0, 4258467.3,      19.5,      19.5,      6.1);        ( 602489.0, 4258467.3,      19.5,      19.5,      6.1);
( 602499.0, 4258467.3,      19.5,      19.5,      6.1);        ( 602509.0, 4258467.3,      19.5,      19.5,      6.1);
( 602519.0, 4258467.3,      19.5,      19.5,      6.1);        ( 602529.0, 4258467.3,      19.5,      19.5,      6.1);
( 602539.0, 4258467.3,      19.5,      19.5,      6.1);        ( 602549.0, 4258467.3,      19.5,      19.5,      6.1);
( 602559.0, 4258467.3,      19.5,      19.5,      6.1);        ( 602569.0, 4258467.3,      19.5,      19.5,      6.1);
( 602579.0, 4258467.3,      19.5,      19.5,      6.1);        ( 602569.0, 4258477.3,      19.5,      19.5,      6.1);
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( 602479.0, 4258497.3,      19.7,      19.7,      6.1);        ( 602489.0, 4258497.3,      19.6,      19.6,      6.1);
( 602499.0, 4258497.3,      19.6,      19.6,      6.1);        ( 602509.0, 4258497.3,      19.5,      19.5,      6.1);
( 602519.0, 4258497.3,      19.5,      19.5,      6.1);        ( 602529.0, 4258497.3,      19.5,      19.5,      6.1);
( 602539.0, 4258497.3,      19.5,      19.5,      6.1);        ( 602549.0, 4258497.3,      19.5,      19.5,      6.1);
( 602559.0, 4258497.3,      19.5,      19.5,      6.1);        ( 602569.0, 4258497.3,      19.5,      19.5,      6.1);
( 602579.0, 4258497.3,      19.5,      19.5,      6.1);        ( 602469.0, 4258507.3,      19.8,      19.8,      6.1);
( 602479.0, 4258507.3,      19.7,      19.7,      6.1);        ( 602489.0, 4258507.3,      19.7,      19.7,      6.1);
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( 602519.0, 4258507.3,      19.5,      19.5,      6.1);        ( 602529.0, 4258507.3,      19.5,      19.5,      6.1);
( 602539.0, 4258507.3,      19.5,      19.5,      6.1);        ( 602549.0, 4258507.3,      19.5,      19.5,      6.1);
( 602559.0, 4258507.3,      19.5,      19.5,      6.1);        ( 602569.0, 4258507.3,      19.5,      19.5,      6.1);
( 602579.0, 4258507.3,      19.5,      19.5,      6.1);        ( 602469.0, 4258517.3,      19.8,      19.8,      6.1);
( 602479.0, 4258517.3,      19.8,      19.8,      6.1);        ( 602489.0, 4258517.3,      19.8,      19.8,      6.1);
( 602499.0, 4258517.3,      19.7,      19.7,      6.1);        ( 602509.0, 4258517.3,      19.6,      19.6,      6.1);
( 602519.0, 4258517.3,      19.5,      19.5,      6.1);        ( 602529.0, 4258517.3,      19.5,      19.5,      6.1);
```

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*** AERMOD - VERSION  18081 ***   *** C:\Users\jvang\Desktop\HRA\DXN-01\DXN01\DXN01.isc                ***        01/08/19
*** AERMET - VERSION  14134 ***   ***                                                                  ***        15:18:35
                                                                                                                  PAGE  48
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  VectorWS

                                        *** DISCRETE CARTESIAN RECEPTORS ***
                                       (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                      (METERS)

    ( 602539.0, 4258517.3,      19.5,      19.5,        6.1);         ( 602549.0, 4258517.3,      19.5,      19.5,        6.1);
    ( 602559.0, 4258517.3,      19.5,      19.5,        6.1);         ( 602569.0, 4258517.3,      19.5,      19.5,        6.1);
    ( 602579.0, 4258517.3,      19.5,      19.5,        6.1);         ( 602529.0, 4258527.3,      19.5,      19.5,        6.1);
    ( 602539.0, 4258527.3,      19.5,      19.5,        6.1);         ( 602549.0, 4258527.3,      19.5,      19.5,        6.1);
    ( 602559.0, 4258527.3,      19.5,      19.5,        6.1);         ( 602569.0, 4258527.3,      19.5,      19.5,        6.1);
    ( 602579.0, 4258527.3,      19.5,      19.5,        6.1);         ( 602549.0, 4258537.3,      19.5,      19.5,        6.1);
    ( 602559.0, 4258537.3,      19.5,      19.5,        6.1);         ( 602569.0, 4258537.3,      19.5,      19.5,        6.1);
    ( 602579.0, 4258537.3,      19.5,      19.5,        6.1);
```

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*** AERMOD - VERSION  18081 ***   *** C:\Users\jvang\Desktop\HRA\DXN-01\DXN01\DXN01.isc                ***        01/08/19
*** AERMET - VERSION  14134 ***   ***                                                                  ***        15:18:35
                                                                                                                  PAGE  49
*** MODELOPTs:    NonDFAULT  CONC  FLAT and  ELEV  FLGPOL  RURAL  VectorWS

                                         *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                            (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                    *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                             (METERS/SEC)

                                                 1.54,   3.09,   5.14,   8.23,  10.80,
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Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\MET Data_21meters\720576.SFC Met Version: 14134
Profile file: ..\MET Data_21meters\720576.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 99999 Upper air station no.: 23230
Name: UNKNOWN Name: OAKLAND/WSO_AP
Year: 2009 Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	02	2	01	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	03	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	04	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	06	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	07	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	08	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	09	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	10	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	11	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	12	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	13	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	14	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	15	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	16	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	17	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	18	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	19	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	21	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	23	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0
09	01	02	2	24	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	-9.00	-9.00	-9.00	999.00	999.	-9.0	999.0	-9.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
09	01	02	01	10.0	1	-999.	-99.00	-999.0	99.0	-99.00	-99.00

F indicates top of profile (=1) or below (=0)

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE1 ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC	
603660.12	4258511.63	1.91035	603665.48	4258501.98	1.90303	
603660.12	4258489.10	1.94320	603638.66	4258471.93	2.05711	
603657.97	4258431.16	2.02211	603624.71	4258420.43	2.18197	MER LOCATION
603659.04	4258405.40	2.04157	603650.46	4258392.53	2.09023	
603640.80	4258371.07	2.15445	602469.02	4258357.31	2.16334	
602479.02	4258357.31	2.25661	602489.02	4258357.31	2.35671	
602499.02	4258357.31	2.46469	602509.02	4258357.31	2.58171	
602519.02	4258357.31	2.70903	602529.02	4258357.31	2.84793	
602539.02	4258357.31	2.99975	602549.02	4258357.31	3.16585	
602559.02	4258357.31	3.34774	602569.02	4258357.31	3.54717	
602579.02	4258357.31	3.76624	602469.02	4258367.31	2.17805	
602479.02	4258367.31	2.27238	602489.02	4258367.31	2.37352	
602499.02	4258367.31	2.48253	602509.02	4258367.31	2.60064	
602519.02	4258367.31	2.72918	602529.02	4258367.31	2.86955	
602539.02	4258367.31	3.02321	602549.02	4258367.31	3.19170	
602559.02	4258367.31	3.37664	602569.02	4258367.31	3.57993	
602579.02	4258367.31	3.80384	602469.02	4258377.31	2.19299	
602479.02	4258377.31	2.28856	602489.02	4258377.31	2.39092	
602499.02	4258377.31	2.50113	602509.02	4258377.31	2.62045	
602519.02	4258377.31	2.75028	602529.02	4258377.31	2.89212	
602539.02	4258377.31	3.04756	602549.02	4258377.31	3.21827	
602559.02	4258377.31	3.40604	602569.02	4258377.31	3.61292	
602579.02	4258377.31	3.84137	602469.02	4258387.31	2.20774	
602479.02	4258387.31	2.30473	602489.02	4258387.31	2.40851	
602499.02	4258387.31	2.52013	602509.02	4258387.31	2.64088	
602519.02	4258387.31	2.77217	602529.02	4258387.31	2.91561	
602539.02	4258387.31	3.07288	602549.02	4258387.31	3.24580	
602559.02	4258387.31	3.43631	602569.02	4258387.31	3.64663	
602579.02	4258387.31	3.87938	602559.02	4258397.31	3.46754	
602569.02	4258397.31	3.68129	602579.02	4258397.31	3.91828	
602469.02	4258407.31	2.23501	602479.02	4258407.31	2.33527	
602489.02	4258407.31	2.44240	602499.02	4258407.31	2.55743	
602509.02	4258407.31	2.68163	602519.02	4258407.31	2.81651	
602529.02	4258407.31	2.96376	602539.02	4258407.31	3.12528	

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC		RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)				OF TYPE	NETWORK GRID-ID
IDLING	1ST HIGHEST VALUE IS	266.52941	AT	603624.71,	4258420.43,	18.29,	18.29, 0.00)	DC	
	2ND HIGHEST VALUE IS	245.80052	AT	603640.80,	4258371.07,	18.29,	18.29, 0.00)	DC	
	3RD HIGHEST VALUE IS	243.95903	AT	603638.66,	4258471.93,	18.29,	18.29, 0.00)	DC	
	4TH HIGHEST VALUE IS	233.32515	AT	603650.46,	4258392.53,	18.29,	18.29, 0.00)	DC	
	5TH HIGHEST VALUE IS	222.86685	AT	603659.04,	4258405.40,	18.29,	18.29, 0.00)	DC	
	6TH HIGHEST VALUE IS	222.60832	AT	603657.97,	4258431.16,	18.29,	18.29, 0.00)	DC	
	7TH HIGHEST VALUE IS	216.32678	AT	603660.12,	4258489.10,	18.29,	18.29, 0.00)	DC	
	8TH HIGHEST VALUE IS	215.27104	AT	603660.12,	4258511.63,	18.29,	18.29, 0.00)	DC	
	9TH HIGHEST VALUE IS	209.84900	AT	603665.48,	4258501.98,	18.29,	18.29, 0.00)	DC	
	10TH HIGHEST VALUE IS	25.35540	AT	602579.02,	4258537.31,	19.51,	19.51, 0.00)	DC	
AREA	1ST HIGHEST VALUE IS	9.70455	AT	603624.71,	4258420.43,	18.29,	18.29, 0.00)	DC	
	2ND HIGHEST VALUE IS	9.59964	AT	603638.66,	4258471.93,	18.29,	18.29, 0.00)	DC	
	3RD HIGHEST VALUE IS	8.77126	AT	603660.12,	4258511.63,	18.29,	18.29, 0.00)	DC	
	4TH HIGHEST VALUE IS	8.72120	AT	603660.12,	4258489.10,	18.29,	18.29, 0.00)	DC	
	5TH HIGHEST VALUE IS	8.61583	AT	603640.80,	4258371.07,	18.29,	18.29, 0.00)	DC	
	6TH HIGHEST VALUE IS	8.52829	AT	603657.97,	4258431.16,	18.29,	18.29, 0.00)	DC	
	7TH HIGHEST VALUE IS	8.52001	AT	603665.48,	4258501.98,	18.29,	18.29, 0.00)	DC	
	8TH HIGHEST VALUE IS	8.50303	AT	603650.46,	4258392.53,	18.29,	18.29, 0.00)	DC	
	9TH HIGHEST VALUE IS	8.31656	AT	603659.04,	4258405.40,	18.29,	18.29, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.43630	AT	602579.02,	4258357.31,	19.51,	19.51, 0.00)	DC	
SLINE1	1ST HIGHEST VALUE IS	4.63460	AT	602579.02,	4258537.31,	19.51,	19.51, 0.00)	DC	
	2ND HIGHEST VALUE IS	4.52296	AT	602579.02,	4258527.31,	19.51,	19.51, 0.00)	DC	
	3RD HIGHEST VALUE IS	4.42953	AT	602579.02,	4258517.31,	19.51,	19.51, 0.00)	DC	
	4TH HIGHEST VALUE IS	4.35752	AT	602579.02,	4258507.31,	19.51,	19.51, 0.00)	DC	
	5TH HIGHEST VALUE IS	4.32474	AT	602569.02,	4258537.31,	19.51,	19.51, 0.00)	DC	
	6TH HIGHEST VALUE IS	4.30334	AT	602579.02,	4258497.31,	19.51,	19.51, 0.00)	DC	
	7TH HIGHEST VALUE IS	4.22305	AT	602579.02,	4258477.31,	19.51,	19.51, 0.00)	DC	
	8TH HIGHEST VALUE IS	4.22280	AT	602569.02,	4258527.31,	19.51,	19.51, 0.00)	DC	
	9TH HIGHEST VALUE IS	4.18756	AT	602579.02,	4258467.31,	19.51,	19.51, 0.00)	DC	
	10TH HIGHEST VALUE IS	4.15206	AT	602579.02,	4258457.31,	19.51,	19.51, 0.00)	DC	
ALL	1ST HIGHEST VALUE IS	278.41593	AT	603624.71,	4258420.43,	18.29,	18.29, 0.00)	DC	

Model Output
Unit Emission Rates (1 g/s)

*** MODELOPTs: NonDFAULT CONC FLAT and ELEV FLGPOL RURAL VectorWS

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   127 Warning Message(s)
A Total of   25992 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   10628 Calm Hours Identified

A Total of   15364 Missing Hours Identified (35.04 Percent)

CAUTION!: Number of Missing Hours Exceeds 10 Percent of Total!
           Data May Not Be Acceptable for Regulatory Applications.
           See Section 5.3.2 of "Meteorological Monitoring Guidance
           for Regulatory Modeling Applications" (EPA-454/R-99-005).

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

SO W320   489   PPARM: Input Parameter May Be Out-of-Range for Parameter   VS
SO W320   490   PPARM: Input Parameter May Be Out-of-Range for Parameter   VS
SO W320   491   PPARM: Input Parameter May Be Out-of-Range for Parameter   VS
SO W320   492   PPARM: Input Parameter May Be Out-of-Range for Parameter   VS

   ****
   *** AERMOD Finishes Successfully ***
   ****

Appendix C. Risk Calculations

Appendix

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Table C1
MER Concentrations for HARP2 Input
Full Buildout

Source No.	Source	Emission Rates[1] **Annual Average** (g/s)	Contaminant	Weight Fraction	AERMOD Output[2] **Annual Average** ($\mu g/m^3$)	Annual Average MER Concentration ($\mu g/m^3$)
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Residential Evaluation						
1	Running Emissions	1.12E-04	Diesel Particulate	1.00E+00	9.705	1.09E-03
2	Idling Emissions	6.24E-08	Diesel Particulate	1.00E+00	266.5	1.66E-05
3	Running Emissions	8.23E-05	Diesel Particulate	1.00E+00	2.182	1.80E-04
Note: Maximum Exposed Receptor (MER) 603624.71, 4258420.43; residence SE of site						For Cancer/Chronic Calculation

[1] Emission Rates, per source, from Source Emissions Inventories (Appendix A).

[2] AERMOD Output (Appendix B) at the maximum exposed receptor (MER) are based on unit emission rates for emission sources (1 g/s per source).

Table C2
HARP2 Results for Cancer Risk and Chronic Hazards
Residential Receptors

No.	Source	Contaminant	Carcinogenic Risks	Chronic Non-Cancer Risks - Toxicological Endpoints*											
			30-yr Resident [1] per million	CV	CNS	IMMUN	KIDNEY	GILV	REPRO	**RESP**	SKIN	EYE	BONE	ENDO	BLOOD
(a)	(b)	(c)	(d)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
Full Buildout															
1	Onsite Running Emissions	Diesel Particulate	0.9							2.18E-04					
2	Idiling Emissions	Diesel Particulate	0.0							3.32E-06					
3	Offsite Running Emission	Diesel Particulate	0.2							3.59E-05					
		Total - All Sources	**1.1**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.57E-04**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Note: Health risks calculated using HARP2, Risk Assessment Standalone Tool, version 18159 (CARB, 2018).

	3rd Trimester	0 < 2 years	2 < 16 years	16 < 30 years	age bin
Dose Exposure Factors:	350	350	350	350	exposure frequency (days/year)
	361	1090	745	335	inhalation rate (L/kg-day) [2]
	1	1	1	1	inhalation absorption factor
Risk Calculation Factors:	10	10	3	1	age sensitivity factor
	0.25	2	14	14	exposure duration (years)
	70	70	70	70	averaging time (years)
	0.85	0.85	0.72	0.73	fraction of time at home

* Key to Toxicological Endpoints

CV	Cardiovascular System
CNS	Central Nervous System
IMMUN	Immune System
KIDN	Kidneys
GILV	Gastrointestinal Tract and Liver/Alimentary Tract
RESP	Respiratory System
REPRO	Reproductive System
SKIN	Skin irritation and/or other effects
EYE	Eye irritation and/or other effects
BONE	Bones and Teeth
ENDO	Endocrine System
BLOOD	Hematological System

[1] For informational purposes, 70-year and 9-year residential cancer risks are 1.3 and 0.8 in a million, respectively.

[2] Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).

Appendices

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Appendix B Preliminary Drainage Report

Appendices

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PRELIMINARY DRAINAGE REPORT

FOR

DIXON CROSSINGS INDUSTRIAL, PHASE 1

October 22, 2018

M&P Job No. 17-0050-01

MORTON PITALO, INC.
CIVIL ENGINEERING • LAND PLANNING • LAND SURVEYING
Folsom * Sacramento * Fresno
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Sacramento, CA 95833
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TABLE OF CONTENTS

EXECUTIVE SUMMARY

I INTRODUCTION

The Proposed development, “Dixon Crossing Industrial, Phase 1” is located in the Northeast Quadrant Specific Plan (NQSP) area. NQSP is located south of I-80, north of Vaughn Road, east of N. First Street (HWY-113) and west of Pedrick Road (See Vicinity Map – **Appendix D**). The overall drainage of NQSP has been discussed in the Dixon Storm Drain Report dated March 1999 prepared by West Yost & Associates. NQSP has been discussed under Basin D, comprising of area D1 (2700 acres of agricultural land located north of I-80) and area D2 (583 acres of existing agricultural land proposed for future development). The drainage report has studied various drainage alternatives necessary for the development and has recommended that a well-defined collection, storage and out-fall system, consistent with the specific plan should be prepared prior to development of this area. The overall drainage improvements needed for future phases of Dixon Crossing Industrial, Phase 1 will be discussed in a comprehensive drainage report to be submitted with the second phase of development.

This amendment to the overall drainage report has been prepared to address the drainage requirements for the Dixon Crossing Industrial, Phase 1 development. Dixon Crossing Industrial, Phase 1 involves proposed development of a portion of APN # 111-019-001, 004 and 111-008-020 (Comprising approximately 38.1 acres). This report expands the original drainage shed area from 41.77 acres to 66.55 acres and the relocation of the existing retention pond to north of the Wal-Mart Parcel. (See **Appendix D**). Total drainage area including the new basin is 77.17 acres.

The vertical datum used for the original master drainage study, previous improvement plans, supporting documents and reports was NGVD-29. This report for the Dixon Crossing Industrial, Phase 1 project and new exhibits prepared are based on the NAVD-88 vertical datum, which is approximately 2.6 feet higher than the previous datum.

II SCOPE

This report discusses drainage mitigation of the Dixon Crossing Industrial, Phase1 development area. This development is a part of Basin D of the City of Dixon Master Storm Drain Report. The drainage mitigation for the overall development will be addressed with comprehensive drainage report (to be submitted with phase 2 of the development). Phase 1 drainage mitigation will be restricted to retaining the site run-off in a temporary retention pond. The proposed development will not alter the existing flow pattern and conveyance

that drains the offsite flows through the project site (Located north of the phase 1 development).

This study to provide information on the following:

1. Proposed retention pond sizing. The existing retention pond was sized for the Vaughn Ranch phase 1a with a development area of 41.77 acres plus some additional capacity was provided to account for any incidental drainage & pond area. The proposed Dixon Crossing Industrial, Phase 1 development will increase the development area from 41.77 acres to 66.55 plus additional area to account for the pond. (See **Appendix D**)

2. The hydraulic grade line calculations for the proposed piped storm drainage system in Dorset Drive. A new extension of the main drain line to the new pond location will be provided with the project. (See **Appendix E**)

III METHODOLOGY

- **Precipitation**

  10-year and 100-year rainfall data used in the calculations are per the City of Dixon Engineering Design Standards, Section 4 – Drainage Design, Figure 4-1.

- **Peak Flow – Design Runoff**

  Peak flow for the 10-year and 100-year design storms was determined per City of Dixon Engineering Design Standards, Section 4 – Drainage Design, Figure 4-3 and Figure 4-5 runoff curves. (See **Appendix A**)

- **Hydraulic Grade Line**

  Hydraulic grade line calculations for the proposed drainage system are per the requirements, guidelines and parameters set forth in the City of Dixon Engineering Design Standards, Section 4 – Drainage Design, subsections DS4-03 and DS4-05.

- **Retention Basin / Pond**

  Retention basin sizing is based on a spreadsheet obtained from the city, per City of Dixon Engineering Design Standards, Section 4 – Drainage Design, subsections DS4-9 and Figure 4-2. (See **Appendix C**)

IV RETENTION BASIN

The proposed retention basin facility has been designed and sized to handle the required 100-year peak storage volume based on the "Retention Basin Water Balance Analysis" worksheet. (See **Appendix C**). Per the worksheet calculations, the peak stored water volume is 62.5 ac-ft and the basin sized accordingly. In addition, freeboard was added to the basin sizing as required.

The calculated water surface elevation in the proposed retention pond is 63.80 ft, NAVD 88 datum, (See **Appendix C**). Note the previous studies and plans were prepared on NAVD 29 vertical datum, which is approximately 2.6 feet lower than the NAVD 88 datum used for these calculations.

The City of Dixon Engineering Design Standards, Section 4 – Drainage Design, subsections DS4-9 (O) requires that at the end of the water balance analysis the basin is no more than 25% full. The calculations show that the basin is empty at the ending water storage balance.

The retention pond is expected to empty by evaporation and percolation. The corresponding water surface elevation in the retention pond will be 63.80 ft, NAVD 88 datum (See **Appendix C**). Note the previous studies and plans were prepared on NAVD 29 vertical datum, which is approximately 2.6 feet lower than the NAVD 88 datum used for these calculations.

V PIPED STORM DRAINAGE SYSTEM AND OVERLAND RELEASE

The design runoff is based on the City of Dixon Standards for 10-year and 100-year design storms.

The hydraulic drainage calculations are included in **Appendix B** of this report and demonstrate the HGL and freeboard meets the city requirements per the Engineering Design Standards, Section 4 – Drainage Design criteria.

The 100-year storm event runoff not captured by the storm drain pipe system will be partially routed (north half of the site) into Dorset Drive by overland release and continue down to the cul-de-sac and into the proposed basin. The top of the proposed basin elevation is lower than the surrounding area (See **Appendix E**). The remaining overland release (south half of the site) will be routed into the future roadway along the east side of the site and continue south along historic flow paths.

VI SUMMARY

- This report demonstrates that the proposed storm drainage system was design and sized to meet the requirements, guidelines and criteria as set forth in the City of Dixon Engineering Design Standards, Section 4 – Drainage Design manual.

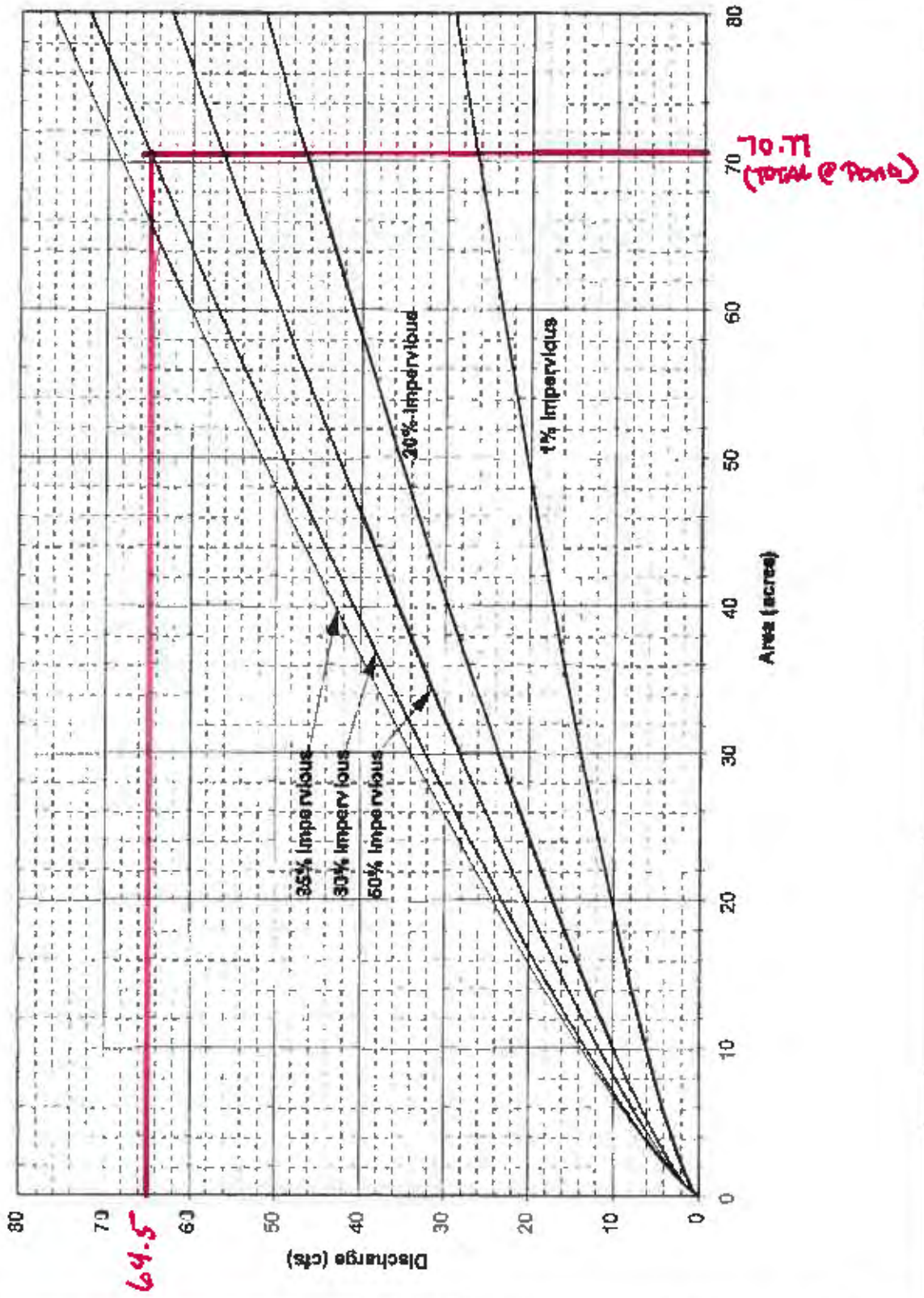
- The HGL calculations provide within this report demonstrate the pipe system is design to meet the requirements, guidelines and criteria as set forth in the City of Dixon Engineering Design Standards, Section 4 – Drainage Design manual.

- The proposed relocated and upsized retention pond is sufficient to accommodate the anticipated water storage volume for the revised drainage shed area.

- Any future phase of Dixon Crossing Industrial will require addition to the retention capacity or other drainage improvements as proposed by this report and the Storm Drain Report (March, 1999) prepared by West Yost & Associates for the City of Dixon.

APPENDIX A

FIGURE 4-3: 10-YEAR PEAK FLOW 0-80 ACRES
FIGURE 4-5: 100-YEAR PEAK FLOW 0-80 ACRES

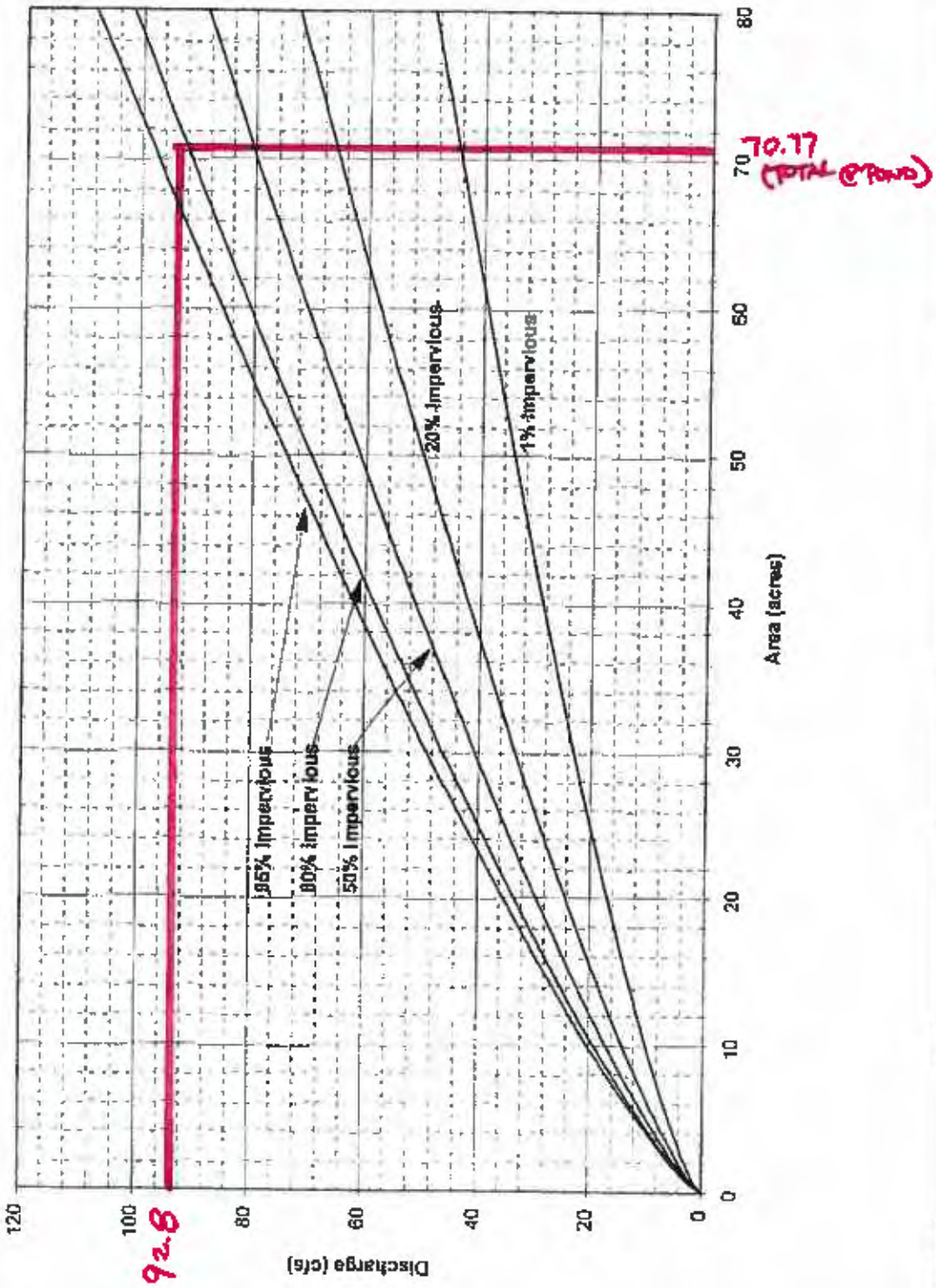


CITY OF DIXON
ENGINEERING
DESIGN STANDARD

Approved November 2003

10-YEAR PEAK FLOW
0 - 80 ACRES

FIG.
4-3



CITY OF DIXON
ENGINEERING
DESIGN STANDARD

Approved: November 2009

100-YEAR PEAK FLOW
0 - 80 ACRES

4-5

APPENDIX B

HGL CALCULATIONS FOR PIPED DRAINAGE SYSTEM

HGL CALCULATIONS

Shed		Area (acres)	Cummulative Area (acres)	10-Year Flow (Fig. 4-3) (cfs)	100-Year Flow (Fig. 4-5) (cfs)		Pipe Dia. (in)	Pipe Length (feet)	Pipe Slope (ft/ft)	HGL Upstream (ft)	Downstream (ft)
A0	DMH1	4.74		7.6	9.5		24	90	0.0013	65.42	65.30
A1	DMH1	4.84		7.6	9.5		24	20	0.0013	65.33	65.30
DMH1	DMH2		9.58	13.1	19.5		30	385	0.0022	65.30	64.46
A2	DMH2	10.71		13.1	19.5		24	90	0.0015	64.71	64.46
DMH2	DMH3		20.29	23	34		36	200	0.0022	64.46	64.02
A3	DMH3	5.18		7.6	9.5		12	25	0.003	64.12	64.02
DMH3	DMH4		25.47	28	40		36	490	0.0012	64.02	63.18
A4.1	DMH5	4.3		6.2	9.5		18	76	0.002	64.35	64.12
DMH5	DMH4		4.3	6.2	9.5		24	387	0.0013	64.12	63.62
A4.2	DMH4	12	12	15.2	23		24	108	0.0013	63.62	63.18
DMH4	DMH6		41.77	42.2	61		48	50	0.001	63.23	63.18
A5.1	DMH7	14.5		18							
DMH7	DMH8		56.27	54	76		48	500	0.001	63.18	62.48
A5.2	DMH8	14.5		18							
DMH8	POND		70.77	64.5	92.8		48	520	0.001	62.48	61.47

(SEE EXHIBITS AND PLANS IN APPENDIX D AND APPENDIX E)

APPENDIX C

RETENTION POND SIZING – DS4-9
STAGED STORAGE CALCULATIONS

17-0050-01

Vaughn Ranch (Phase-1) - Amendment

Retention Pond Sizing

(Based on City of Dixon Design Standards, DS4-9)

By: Greg Bardini, PE
Dated : 01/14/03
Amended: 09/29/2018

Rainfall-Runoff Analysis

Impervious Acreage: 60
Pervious Acreage: 17.17
77.17

Date	Design Rainfall	Impervious Area Runoff	Effective Rainfall	Pervious Runoff	Total Runoff
	in	ac-ft	in	ac-in	ac-ft
October	0.28	1.40	0.00	0.00	1.40
November	3.57	17.85	1.55	2.22	20.07
December	2.42	12.10	0.76	1.09	13.19
January	10.90	54.50	5.61	8.03	62.53
February	7.30	36.50	6.60	9.44	45.94
March	8.15	40.75	4.73	6.77	47.52
April	1.21	6.05	0.06	0.09	6.14
May	0.57	2.85	0.00	0.00	2.85
June	0.60	3.00	0.00	0.00	3.00
July	0.30	1.50	0.00	0.00	1.50
August	0.00	0.00	0.00	0.00	0.00
September	0.00	0.00	0.00	0.00	0.00
Total	**35.30**	**176.50**	**19.31**	**27.63**	**204.13**
Maximum	**10.9**	**54.50**	**6.60**	**9.44**	**62.53**

Retention Basin Water Balance Analysis

Retention Pond Area (acres): 6.9 (At Elev. 64.5)
Retention Pond Depth (ft) 9.5
Retention Pond Side Slope (_H:1V) 4

25% of Maximum Volume (ac-ft): 15.6

Start-of-Month Volume of Stored Water	Water Surface Area	Water Depth	Potential Unit Evaporation Rate	Potential Evaporation Loss	Potential Unit Percolation Loss (a)	Potential Percolation Loss	Total Loss	End-of-Month Volume of Stored Water
ac-ft	ac	ft	in	ac-ft	in/ Month	ac-ft	ac-ft	ac-ft
0.00	0.0	0.0	4.03	0.00	81.67	0.00	0.00	1.40
1.40	5.2	0.3	2.10	0.91	81.67	35.37	1.40	20.07
20.07	5.8	3.7	1.55	0.75	81.67	39.53	20.07	13.19
13.19	5.6	2.5	1.55	0.72	81.67	38.04	13.19	62.53
62.53	7.0	10.0	2.24	1.31	81.67	47.85	49.16	59.31
59.31	7.0	9.8	3.72	2.17	81.67	47.58	49.74	57.08
57.08	6.9	9.5	5.10	2.95	81.67	47.16	50.11	13.11
13.11	5.6	2.4	6.82	3.17	81.67	37.92	13.11	2.85
2.85	5.2	0.5	7.80	3.40	81.67	35.61	2.85	3.00
3.00	5.3	0.6	8.68	3.80	81.67	35.73	3.00	1.50
1.50	5.2	0.3	7.75	3.36	81.67	35.37	1.50	0.00
0.00	0.0	0.0	5.70	0.00	81.67	0.00	0.00	0.00
			57.04	**22.53**	**980.00**	**400.17**	**204.13**	
62.5	**7.0**	**10.0**	**8.68**	**3.80**	**81.67**	**47.85**	**50.11**	**62.5**

(a) These percolation rates are ffrom the Project Geotechnical Report prepared by Raney Geotechnical, dated September 2018. A factor of safety 1.5 is assumed against average field percolation rate of 122.5 inches per year.

122.50 In/Yr
0.336 Perc Rate in In/day
0.014 Per Rate in In/Hr

81.67 1.5 Fact of Safety
0.224 Perc Rate in In/day
0.009 Per Rate in In/Hr

PROPOSED RETENTION BASIN
Project: DIXON 133
Basin Description: PROPOSED RETENTION BASIN

Contour Elevation	Contour Area (sq. ft)	Depth (ft)	Incremental Volume Avg. End (cu. ft)	Cumulative Volume Avg. End (cu. ft)
50.600	152,681.01	N/A	N/A	0.00
50.800	154,168.79	0.200	30684.98	30684.98
51.000	155,661.34	0.200	30983.01	61667.99
51.200	157,158.65	0.200	31282.00	92949.99
51.400	158,660.73	0.200	31581.94	124531.93
51.600	160,185.39	0.200	31884.61	156416.54
51.800	161,730.93	0.200	32191.63	188608.17
52.000	163,279.81	0.200	32501.07	221109.25
52.200	164,831.42	0.200	32811.12	253920.37
52.400	166,385.99	0.200	33121.74	287042.11
52.600	167,943.90	0.200	33432.99	320475.10
52.800	169,504.52	0.200	33744.84	354219.94
53.000	171,068.38	0.200	34057.29	388277.23
53.200	172,635.32	0.200	34370.37	422647.61
53.400	174,204.96	0.200	34684.03	457331.63
53.600	175,778.13	0.200	34998.31	492329.94
53.800	177,354.09	0.200	35313.22	527643.16
54.000	178,929.54	0.200	35628.36	563271.53
54.200	180,497.18	0.200	35942.67	599214.20
54.400	182,071.83	0.200	36256.90	635471.10
54.600	183,672.09	0.200	36574.39	672045.49
54.800	185,280.72	0.200	36895.28	708940.78
55.000	186,903.86	0.200	37218.46	746159.23
55.200	188,541.20	0.200	37544.51	783703.74
55.400	190,171.81	0.200	37871.30	821575.04
55.600	191,806.24	0.200	38197.81	859772.85
55.800	193,446.01	0.200	38525.23	898298.07
56.000	195,091.26	0.200	38853.73	937151.80
56.200	196,742.56	0.200	39183.38	976335.18
56.400	198,399.19	0.200	39514.18	1015849.35
56.600	200,061.14	0.200	39846.03	1055695.39
56.800	201,728.81	0.200	40178.99	1095874.38
57.000	203,402.31	0.200	40513.11	1136387.49
57.200	205,081.13	0.200	40848.34	1177235.84
57.400	206,765.26	0.200	41184.64	1218420.48
57.600	208,455.61	0.200	41522.09	1259942.56
57.800	210,152.43	0.200	41860.80	1301803.37
58.000	211,855.69	0.200	42200.81	1344004.18
58.200	213,565.93	0.200	42542.16	1386546.34
58.400	215,284.06	0.200	42885.00	1429431.34
58.600	217,009.22	0.200	43229.33	1472660.66
58.800	218,741.36	0.200	43575.06	1516235.72

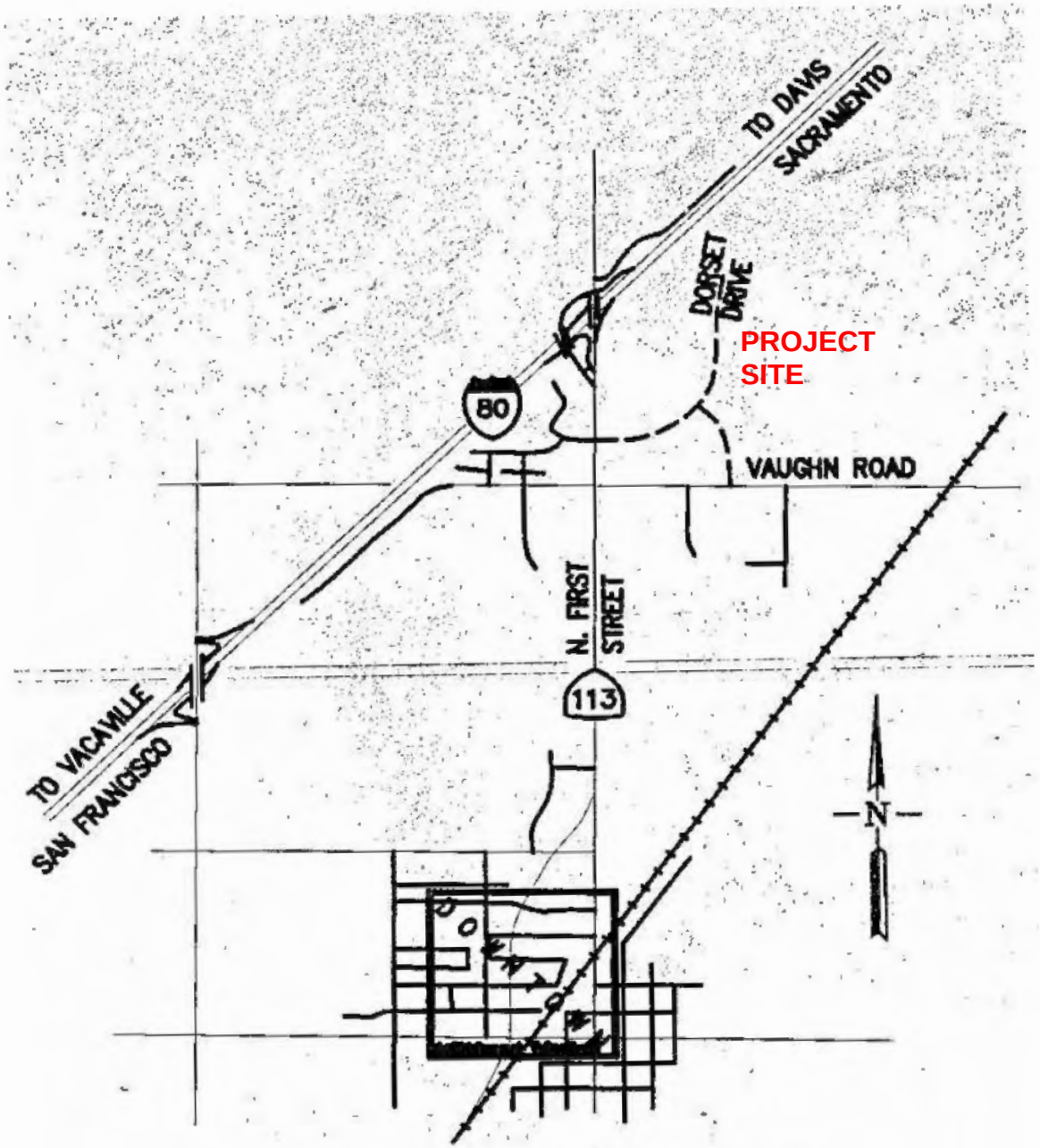
PROP RETEN BASIN 18.1022_R

59.000	220,480.70	0.200	43922.21	1560157.93
59.200	222,227.80	0.200	44270.85	1604428.78
59.400	223,981.87	0.200	44620.97	1649049.75
59.600	225,743.00	0.200	44972.49	1694022.23
59.800	227,511.75	0.200	45325.47	1739347.71
60.000	229,288.15	0.200	45679.99	1785027.70
60.200	231,071.67	0.200	46035.98	1831063.68
60.400	232,862.31	0.200	46393.40	1877457.08
60.600	234,661.74	0.200	46752.40	1924209.48
60.800	236,470.41	0.200	47113.22	1971322.70
61.000	238,288.02	0.200	47475.84	2018798.54
61.200	240,114.66	0.200	47840.27	2066638.81
61.400	241,951.16	0.200	48206.58	2114845.39
61.600	243,796.68	0.200	48574.78	2163420.17
61.800	245,651.14	0.200	48944.78	2212364.96
62.000	247,515.58	0.200	49316.67	2261681.63
62.200	249,393.40	0.200	49690.90	2311372.53
62.400	251,284.05	0.200	50067.75	2361440.27
62.600	253,187.53	0.200	50447.16	2411887.43
62.800	255,107.04	0.200	50829.46	2462716.89
63.000	257,045.93	0.200	51215.30	2513932.18
63.200	259,003.62	0.200	51604.96	2565537.14
63.400	260,987.29	0.200	51999.09	2617536.23
63.600	263,123.68	0.200	52411.10	2669947.33
63.800	276,240.95	0.200	53936.46	2723883.79
64.000	301,180.04	0.200	57742.10	2781625.89
64.200	302,211.57	0.200	60339.16	2841965.05
64.400	303,243.11	0.200	60545.47	2902510.52
64.600	304,274.23	0.200	60751.73	2963262.25
64.800	305,304.87	0.200	60957.91	3024220.16
65.000	306,335.01	0.200	61163.99	3085384.15

2723883.79 CU.FT. = 62.53 AC-FT

APPENDIX D

PROJECT VICINITY MAP
EXISTING – STORMWATER SHED MAP
PROPOSED – STORMWATER SHED MAP



VICINITY MAP

NO SCALE

EXISTING TOTAL SHED AREA 41.77 ACRES
EXISTING SHED MAP
MIN. BLDG. PAD ELEV.= 64.00
NODE A4.1 A = 4.3 ΣA = 4.3AC Q = 7 CFS HGL10yr = 58.13
4.30 AC
DMH5
GFL= 62.10 24"FL=55.01
92' IOD
62.15 FL/HP
100YR FLOOD CONTAINED IN PIPE
STOCKPILE
20' SEWER ESMT
GRAPHIC SCALE
100 50 0 100 200
1 in = 100 ft
65.00
NOTE:
THE MINIMUM BUILDING PAD ELEVATIONS, ARE BASED THE NEXT DOWNSTREAM HIGH POINT IN THE GUTTER FLOWLINE PROFILE PLUS 0.5' TO ACCOUNT FOR THE ESTIMATED DEPTH OF WATER FLOWING IN THE STREET, PLUS 1.0 FOOT TO PROVIDE REQUIRED BUILDING PAD FREE BOARD. THESE MINIMUM BUILDING PAD ELEVATIONS MAY HAVE TO BE REVISED WHEN THE SPECIFIC GRADING AND STORM DRAIN SYSTEMS ARE DESIGNED TO SERVE THE INDIVIDUAL PARCELS.
APN # 111-080-030 (SIERRA MEDICAL ENTERPRIZE INC.)
EXISTING RETENTION POND POND BOTTOM=52.0
10 YEAR PONDING ELEVATION = 58.87
100 YEAR PONDING ELEVATION = 61.09
MIN. BLDG. PAD ELEV.= 64.00
12.00 AC
APN # 111-080-020 (TVOB)
NODE A4 A = 0 ΣA = 41.77 AC Q= 21 CFS HGL10yr = 57.34
NODE A4.2 A = 12 ΣA = 12AC Q = 15.5CFS HGL10yr = 58.01
24"SD
GFL= 62.18 24"FL=54.23
GFL= 62.18 36"FL=54.23 24" FL=54.23 48"FL=53.23
100YR FLOOD CONTAINED IN PIPE
48"SD
DMH4
DMH3
65.00
MIN. BLDG. PAD ELEV.= 64.70
5.18 AC
NODE A3 A = 5.18 AC ΣA = Q = 12.70CFS HGL10yr = 57.63
GFL= 62.18 36"FL=54.36
4.74 AC
APN # 111-080-210 (TSAKOPOULOS)
62.33 FL/HP
36"SD
100YR FLOOD CONTAINED IN PIPE
24' IOD
MIN. BLDG. PAD ELEV.= 64.20
APN # 111-080-200 (DUFFEL)
NODE A0 A = 4.74 AC ΣA = 4.74 AC Q = 2.5 CFS HGL10yr = 59.50
FOR PIPED SYSTEM FAILURE OVERLAND RELEASE
40' IOD
62.24 FL/HP
62.50 (FUTURE GRADE BREAK) FUTURE ROAD SHOULD BE DESIGNED TO ROUTE THE OVERLAND RELEASE TOWARDS THE RETENTION POND.
GFL= 62.07 24"FL=56.35
62.94 FL/HP
OVERLAND RELEASE
36"SD
GFL= 61.27 36"FL=54.82
NODE # A2.5 A = 0 AC ΣA = 20.29 AC Q = 10.20CFS HGL10yr = 58.36
DMH2
OVERLAND RELEASE
DMH1
DORSET DRIVE
30"SD
GFL= 61.77 30"FL=55.35 36"FL=55.35
64' IOD
NODE A1 A = 4.84 AC ΣA = 9.58 AC Q = 4.75 CFS HGL10yr = 59.36
GFL= 62.49 24"FL=56.19 30"FL=56.19
NODE A2 A = 10.71 AC ΣA = 20.29 AC Q= 10.20 HGL10yr = 58.93
APN # 111-080-180 (WAREMART INC.)
4.84 AC
APN # 111-080-190 (WAREMART INC.)
10.71 AC
MIN. BLDG. PAD ELEV.= 64.70
MIN. BLDG. PAD ELEV.= 64.20
OVERLAND RELEASE (POST DEVELOPED)
FOR PIPED SYSTEM FAILURE
FUTURE SOUTH PKWY
APN # 111-080-170 (WAREMART INC.)
NORTH FIRST STREET (HIGHWAY 113)
VAUGHN ROAD

NOT FOR CONSTRUCTION

NO.	DESCRIPTION	APPD.	DATE

REVISIONS

SCALE:
HORIZ. 1"= 100'
VERT. 1"=

BENCH MARK BM R 967
ELEV 62.78
USC&GS BRASS DISK R967 SET IN THE NORTH END OF A CONCRETE HEADWALL AT THE SOUTHWEST CORNEROF N. FIRST STREET AND VAUGHN ROAD.

COMPUTED	STAFF
DESIGNED	RAS
DRAWN	STAFF
PROJ. ENGR.	MIT

REGISTERED PROFESSIONAL ENGINEER GREGORY J. BARDINI No. 50725 Sept 30, 2005 CIVIL STATE OF CALIFORNIA

MORTON & PITALO, INC.
CIVIL ENGINEERING ✱ PLANNING ✱ SURVEYING
1788 TRIBUTE ROAD • SUITE 200 • SACRAMENTO, CA 95815
PHONE: 916/927-2400 • FAX: 916/567-0120
EMAIL: engr@mpengr.com

IMPROVEMENT PLANS FOR
VAUGHN RANCH
DRAINAGE SHED MAP

CITY OF DIXON, COUNTY OF SOLANO, CALIFORNIA

DATE FEB 2003
SHEET 1 OF 1
VAUGHN RANCH
JOB NO. 960188

X:\PROJ\960188\DWG\96188SHD-N.DWG 11-05-03 08:25 am -- rsingh

NW 1/4 SECTION 12 T7N, R1E, WDM

PROPOSED RETENTION POND
W.S.E. = 63.80
B.O.P. = 50.50

PROPOSED PROJECT AREA

PROPOSED TOTAL SHED AREA
77.17 ACRES

A4.1 4.30 AC

A4.2

A5
PROPOSED PROJECT AREA
30.1 +/- ACRES

A3
5.18 AC

A0
4.74 AC

A1
4.84 AC

A2
10.71 AC

(TO BE RELOCATED)
EXISTING
RETENTION POND
POND BOTTOM=52.0
10 YEAR PONDING ELEVATION = 58.87
100 YEAR PONDING ELEVATION = 61.09

DMH1
DMH2
DMH3
DMH4
DMH5

MIN. BLDG. PAD ELEV.= 64.00
MIN. BLDG. PAD ELEV.= 64.70
MIN. BLDG. PAD ELEV.= 64.20
MIN. BLDG. PAD ELEV.= 64.70
MIN. BLDG. PAD ELEV.= 64.20

NODE A4
A= 0
ΣA= 41.77 AC
Q= 21 CFS
HGL10yr = 57.34

NODE A3
ΣA= 5.18 AC
ΣA=
Q= 12.70CFS
HGL10yr = 57.63

NODE A0
ΣA= 4.74 AC
ΣA= 4.74 AC
Q= 2.4 CFS
HGL10yr = 59.50

NODE A1
ΣA= 4.84 AC
ΣA= 4.84 AC
Q= 4.75 CFS
HGL10yr = 59.38

NODE A2
ΣA= 10.71 AC
ΣA= 20.09 AC
Q= 10.20
HGL10yr = 58.63

NODE # A2.5
ΣA= 0 AC
ΣA= 20.09 AC
Q= 10.20 CFS
HGL10yr = 58.63

NODE A5
A= 11.84
ΣA= 53.60 AC
Q= XX CFS
HGL10yr = XXX

GFL= 62.10
24"FL=55.01

GFL= 62.18
24"FL=54.23

GFL= 62.18
36"FL=54.23
24" FL=54.23
48"FL=53.23

GFL= 62.18
36"FL=54.36

GFL= 62.07
24"FL=56.35

GFL= 62.49
24"FL=56.19
30"FL=56.19

GFL= 61.77
30"FL=55.35
36"FL=55.35

GFL= 61.27
36"FL=54.82

62.15 FL/HP
62.33 FL/HP
62.24 FL/HP
62.94 FL/HP

92" IOD
24" IOD
40' IOD
64' IOD

24"SD
30"SD
36"SD
48"SD

100YR FLOOD CONTAINED IN PIPE

65.00

20' SEWER ESMT

62.50 (FUTURE GRADE BREAK)
FUTURE ROAD SHOULD BE DESIGNED TO ROUTE THE OVERLAND RELEASE TOWARDS THE RETENTION POND.

OVERLAND RELEASE
FOR PIPED SYSTEM FAILURE
OVERLAND RELEASE (FOR DEVELOPED)
FUTURE ROS WAY

DORSET DRIVE
NORTH FIRST STREET (HIGHWAY 113)
VAUGHN ROAD

GRAPHIC SCALE
100 50 0 100 200
1 in = 100 ft

NOTE:
THE MINIMUM BUILDING PAD ELEVATIONS, ARE BASED THE NEXT DOWNSTREAM HIGH POINT IN THE GUTTER FLOWLINE PROFILE PLUS 0.5' TO ACCOUNT FOR THE ESTIMATED DEPTH OF WATER FLOWING IN THE STREET, PLUS 1.0 FOOT TO PROVIDE REQUIRED BUILDING PAD FREE BOARD. THESE MINIMUM BUILDING PAD ELEVATIONS MAY HAVE TO BE REVISED WHEN THE SPECIFIC GRADING AND STORM DRAIN SYSTEMS ARE DESIGNED TO SERVE THE INDIVIDUAL PARCELS.

PROPOSED SHED MAP

mortonpitalo

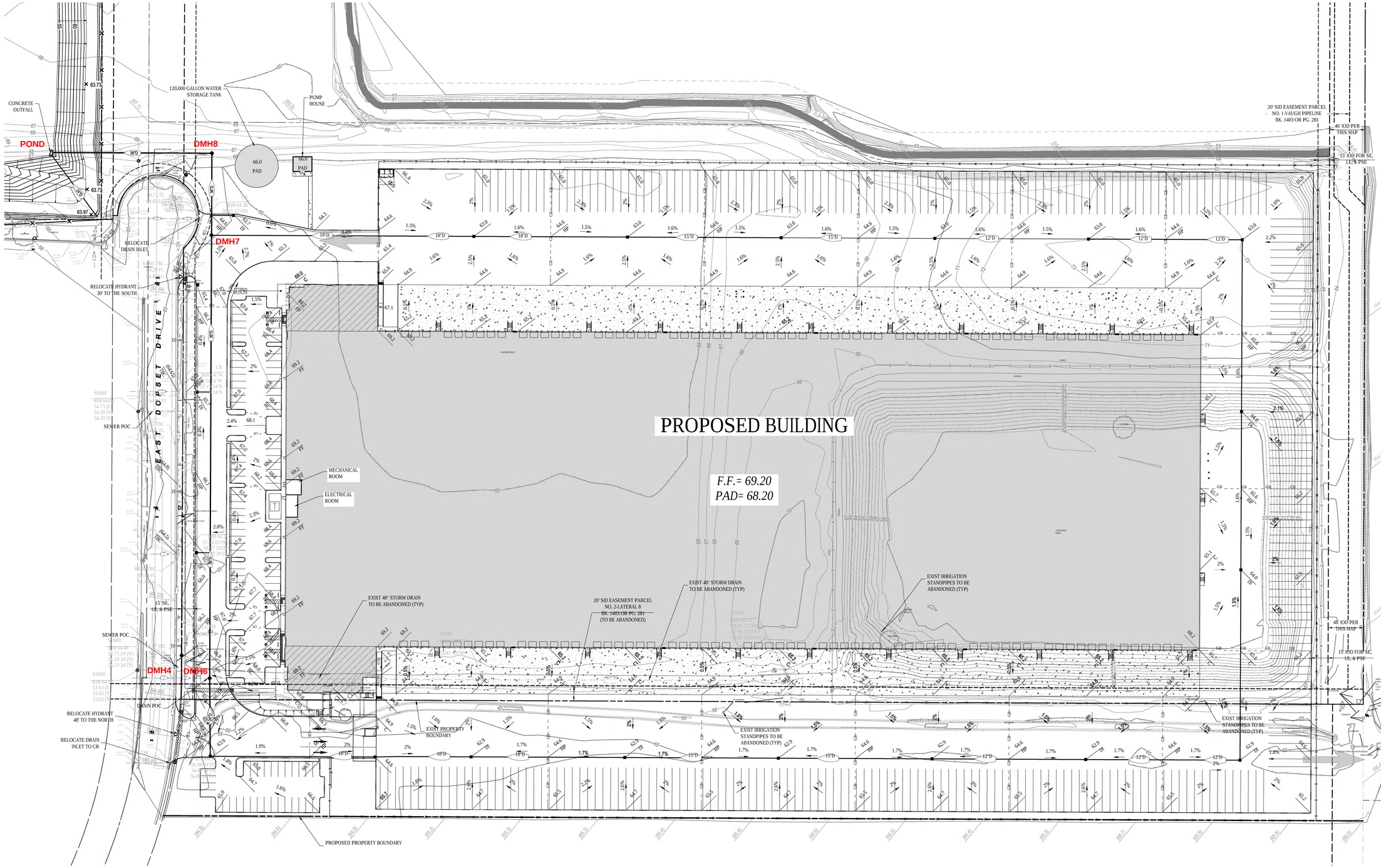
APPENDIX E

PRELIMINARY UTILITY PLAN
PRELIMINARY GRADING PLAN
PRELIMINARY RETENTION POND PLAN

ESTIMATED EARTHWORK				
	ESTIMATED QUANTITIES			
	CUT (CY)	FILL (CY)	CUT TO FILL (15% SHRINK)	NET (CY)
BUILDING SITE	68,700	123,500	142,000	73,300 (FILL)
POND LOCATION	132,200	0		132,200 (CUT)
STOCKPILE				58,900

N

GRAPHIC SCALE
50 25 0 50 100
1" = 50'



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HPA architecture

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383 4th street, suite 101
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tel: 949-862-2113
email: hpa@hparchs.com

mortonpitalo

MORTON & PITALO, INC.
2870 GATEWAY OAKS DR. #120
SACRAMENTO, CA 95833

Owner:

SCANNELL PROPERTIES

3569 Mt. Diablo Blvd.,
Suite 220 Lafayette, CA 94549
Phone: 510-899-8302

Project:

EAST DORSET DRIVE

DIXON, CA 95620

Consultants:

Civil:	MORTON & PITALO, INC.
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	
Fire Protection:	
Soils Engineer:	

Title:

PRELIMINARY GRADING PLAN

Project Number:	17-0050-00
Drawn by:	JRO
Date:	10/15/2018
Revision:	

Sheet:

LEGEND

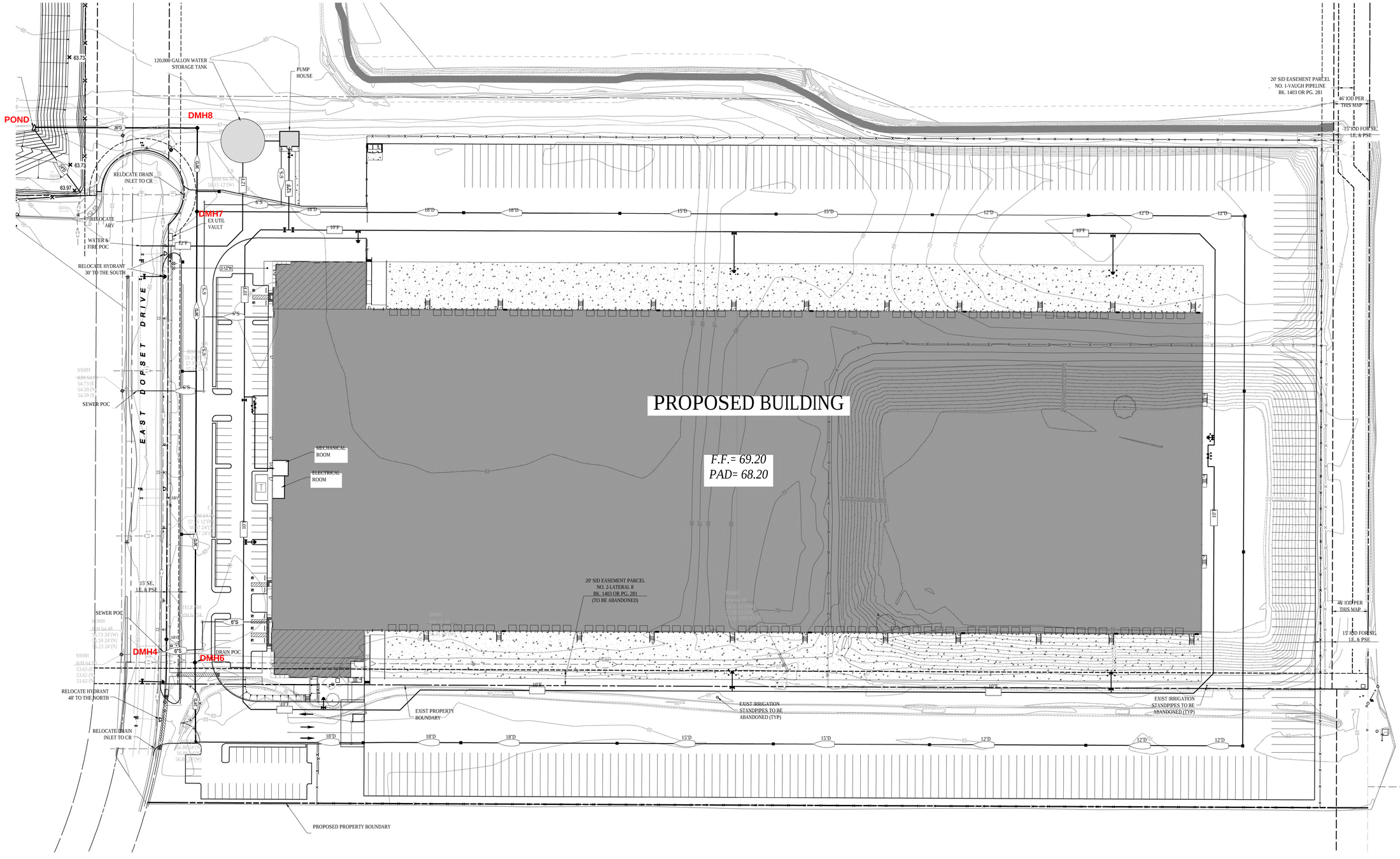
SYMBOLS:

EXISTING	PROPOSED	DESCRIPTION
12"D	12"D	STORM DRAIN PIPE & SIZE
6"S	6"S	SANITARY SEWER PIPE & SIZE
6"W	6"W	DOMESTIC WATER PIPE & SIZE
6"F	6"F	FIRE PROTECTION WATER PIPE & SIZE
2"G	2"G	NATURAL GAS PIPE & SIZE
		MANHOLE
		STORM DRAIN INLET
		CLEANOUT
		VALVE
		FIRE HYDRANT
		BLOW OFF VALVE
R GB	R GB	RIDGE OR GRADE BREAK
2%	2%	DIRECTION OF DRAINAGE
		FLOWLINE OF SWALE

EXISTING	PROPOSED	DESCRIPTION
		RETAINING WALL
		FENCE
23.45 × 51.00	23.45 × 51.00	ELEVATION CALLOUTS
		EXISTING TREE
		REMOVE EXISTING TREE
		EXISTING TREE TO BE RELOCATED
		SLOPE BANK: TOP OF BANK TOE OF BANK
	1 1	DETAIL REFERENCE: DETAIL IDENTIFICATION SHEET LOCATION
	A 1	SECTION REFERENCE: SECTION IDENTIFICATION SHEET LOCATION

N

GRAPHIC SCALE
50 25 0 50 100
1" = 50'



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Phone: 510-899-8302

Project:

EAST DORSET DRIVE

DIXON, CA 95620

Consultants:

Civil:	MORTON & PITALO, INC.
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	
Fire Protection:	
Soils Engineer:	

Title:
PRELIMINARY UTILITY PLAN

Project Number:	17-0050-00
Drawn by:	JRO
Date:	10/15/2018
Revision:	
Sheet:	

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POND BOTTOM=50.5

Appendices

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Appendix C Exterior Noise Analysis

Appendices

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TECHNICAL MEMORANDUM

DATE	January 18, 2019
TO	City of Dixon
ADDRESS	600 A Street, Dixon, CA 95620
CONTACT	Scott Greely, Associate Planner
FROM	Joshua Carman, Senior Associate
SUBJECT	Northeast Quadrant Specific Plan Scannell Properties Warehouse Noise and Vibration Technical Memorandum
PROJECT NUMBER	DXN-01

1. Introduction

This Noise and Vibration Technical Memorandum is prepared for the City of Dixon to evaluate the potential noise and vibration impacts pursuant to the California Environmental Quality Act (CEQA) from the development and operation of the proposed warehousing project (Proposed Project) within the Northeast Quadrant Specific Plan (NQSP) of the City of Dixon.

PlaceWorks was retained by the City of Dixon to conduct this analysis for the Proposed Project in comparison to impacts identified in the 1995 Certified EIR for the NQSP (Approved Project).

1.1 PROJECT LOCATION

The Proposed Project is within the NQSP area and consists of approximately 39.7 acres at the northeast corner of Dorset Drive over the following three separate parcels:

» Site A, 25.69-acres, Assessor's Parcel Number (APN) 0111-190-010
» Site B, 5.80-acres, APN 0111-080-011
» Site C, 8.26-acres APN 0111-190-030

The primary development would occur over Sites A and B, which total approximately 31.49 acres. The project site is bounded by vacant land to the north, south, and east and by East Dorset Drive and a Walmart Supercenter to the west. Existing sensitive receptors proximate to the project site include residences approximately 650 feet southeast and 1,700 feet southwest of the project site.

1.2 PROJECT DESCRIPTION

Proposed Project

The Proposed Project would develop a 502,264-square foot Type III-b tilt-up industrial warehouse distribution facility, approximately 50 feet tall to the parapet. The north and south side of the proposed building would each include 63 truck bays for a total of 126 truck bays. Approximately 110 standard parking spaces (180 square feet) and 289 trailer-sized parking spaces (550 square feet) would be provided. It is assumed that the warehouse would operate 24 hours a day and 7 days a week.

APPROVED PROJECT

The NQSP allows for development of approximately 5.8 million square feet of development as shown in Table 1, *Approved Project Buildout Summary*. There is 286,700 square feet developed within the 643-acre Specific Plan, resulting in a remaining development capacity of approximately 5.5 million square feet.

Table 1 Approved Project Buildout Summary

NQSP Land Use Designation	Acres	FAR	Approved Project	Developed	Remaining Development Capacity
Highway Commercial	142.2	0.25	1,548,600	220,000	1,328,600
Community Commercial	51.9	0.25	565,200	4,400	560,800
Professional Office	105.4	0.30	1,377,000	0	1,377,000
Light Industrial	214.4	0.25	2,334,800	62,300	2,272,500
ROW/Open Space	129.1				129.1
TOTAL	**643**		**5,825,600**	286,700	5,538,900

1.3 NOISE TERMINOLOGY AND DESCRIPTORS

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

The following are brief definitions of terminology used in this document:

- Sound. A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- Noise. Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- Decibel (dB). A unitless measure of sound on a logarithmic scale.
- A-Weighted Decibel (dBA). An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.

- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- **Day-Night Sound Level (Ldn or DNL)**. The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM

- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the sound levels occurring during the period from 7:00 PM to 10:00 PM and 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.

  Note: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive—that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are considered interchangeable and are treated as equivalent in this assessment.

- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

Characteristics of Sound

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves.

Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). Loudness or amplitude is measured in dB, frequency or pitch is measured in Hertz [Hz] or cycles per second, and duration or time variations is measured in seconds or minutes.

Amplitude

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 2, *Noise Perceptibility*, presents the subjective effect of changes in sound pressure levels. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dB are detectable under quiet, controlled conditions, and changes of less than 1 dB are usually not discernible (even under ideal conditions). A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernible to most people in an exterior environment, and a 10 dB change is perceived as a doubling (or halving) of the sound.

Table 2 Noise Perceptibility

Change in dB	Noise Level
± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies, David A. and Colin H. Hansen. 2009. Engineering Noise Control: Theory and Practice. 4th ed. New York: Spon Press.

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but are "felt" more as a vibration (predominantly, in a person's chest cavity). Similarly, though people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people's judgments of the "noisiness" of different sounds and has been used for many years as a measure of community and industrial noise.

Duration

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time; half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8 and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour, respectively. These "n" values are typically used to demonstrate compliance for stationary noise sources with many cities' noise ordinances. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period, respectively.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and many local jurisdictions use an adjusted 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that

an artificial increment (or "penalty") of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00 PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher). The CNEL or L_{dn} metrics are commonly applied to the assessment of roadway and airport-related noise sources.

Sound Propagation

Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single-point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level would be 78 dBA, and at 200 feet it would be 72 dBA. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance over a reflective ("hard site") surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by an additional 1.5 dB for each doubling of distance.

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, through generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- Ambient (background) sound level
- General nature of the existing conditions (e.g., quiet rural or busy urban)
- Difference between the magnitude of the sound event level and the ambient condition
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, Table 3, *Typical Noise Levels*, shows typical noise levels from familiar sources.

Table 3 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet		
	100	

Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
Very Remote & Unpopulated Area Nighttime		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation (Caltrans), 2013, September. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*.

Characteristics of Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities such as railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. Vibration displacement is the distance that a point on a surface moves from its original static position. The instantaneous speed that a point on a surface moves is the velocity, and the rate of change of the speed is the acceleration. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During project construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure. These types of vibration are best measured and described in terms of velocity and acceleration.

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration signal and RMS is the square root of the average of the squared amplitude of the signal. PPV and RMS are related to each other by the signal's crest factor. PPV is more appropriate for evaluating potential building damage.

The units for PPV are normally inches per second (in/sec). In this study, all PPV levels are in in/sec. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Even the more-persistent Rayleigh waves decrease relatively quickly as they move away from the source of the vibration. Man-made vibration impacts are, therefore, usually confined to short distances from the source (FTA, 2018).

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold

of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 4, *Human Reaction to Typical Vibration Levels*, displays the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Table 4 Human Reaction to Typical Vibration Levels

Vibration Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e. not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: California Department of Transportation (Caltrans), 2013, September. *Transportation- and Construction-Induced Vibration Guidance Manual.*

Construction operations generally include a wide range of activities that can generate groundborne vibration. In general, blasting, pile driving, and demolition of structures generate the highest vibrations. Heavy trucks can also generate groundborne vibrations, which can vary, depending on vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, and differential settlement of pavement all increase the vibration levels from vehicles passing over a road surface. Construction vibration is normally of greater concern than vibration from normal traffic flows on streets and freeways with smooth pavement. Trains generate substantial quantities of vibration due to wheel-rail interactions, steel wheels, heavy loads, and engine operations (FTA, 2018).

2. Summary of Previous Environmental Analysis

The following summarizes the noise impacts associated with the NQSP project (Approved Project) as identified in the certified Environmental Impact Report for the Northeast Quadrant Specific Plan (State Clearinghouse No. 92113073) (1995 Certified EIR).

Short Term Construction

The 1995 Certified EIR determined that short-term construction noise impacts associated with the NQSP would be significant, but that they would be reduced to less than significant with implantation of Mitigation Measures N-A and N-B.

Long Term Noise Impacts

The 1995 Certified EIR determined that long-term noise impacts associated with traffic would be significant, but that they would be reduced to less than significant with implementation of Mitigation Measure N-C.

On-Site Noise

The 1995 Certified EIR determined that on-site noise impacts would be significant impact, but that they would be reduced to less than significant with implementation of Mitigation Measure N-D.

Cumulative Noise Impacts

The 1995 Certified EIR determined that cumulative noise impacts would be less than significant.

3. Adopted Mitigation Measures Applicable to the Proposed Project

The following noise-related mitigation measures were adopted for the 1995 Certified EIR. These mitigation measures apply to the Proposed Project.

MM N-A All contractors shall comply with local, state and federal noise regulations, including fitting all equipment with mufflers according to the manufacturer's specifications.

MM N-B Construction activities shall not take place between 7:00 p.m. and 7:00 a.m. on weekdays and Saturday, and shall not be permitted on Sunday or on federal holidays.

MM N-C Future development shall comply with the City of Dixon. Development criteria in the NQSP shall be required to demonstrate conformance with the City's noise standard or site specific mitigation measures to ensure that noise thresholds are not exceeded.

MM N-D Residential land uses are not proposed for this project. Commercial and office uses located within the proposed year 2010 70 CNEL noise contour, and industrial uses proposed within the 75 CNEL noise contour shall be sited and designed to be sensitive to the adjacent I-80 noise source by incorporating appropriate building materials and design techniques to improve both the interior and exterior noise environment. In addition, the use of landscape barriers shall be explored to reduce noise levels adjacent to I-80.

4. Impacts Associated with the Proposed Project

Regulatory Setting

The City of Dixon noise and land use compatibility guidelines are shown in Table 5.

Table 5 Acceptable Levels of Noise Exposure

Land Use Category	Community Noise Exposure Level, Ldn or CNEL dBA						
	50-55	55-60	60-65	65-70	70-75	75-80	80-85
Residential – Low Density Single Family, Duplex, Mobile Homes							
Residential – Multiple Family							

Table 5 Acceptable Levels of Noise Exposure

Land Use Category	Community Noise Exposure Level, Ldn or CNEL dBA						
	50-55	55-60	60-65	65-70	70-75	75-80	80-85
Transient Lodging – Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

Interpretation

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

Table 5 Acceptable Levels of Noise Exposure

Land Use Category	Community Noise Exposure Level, Ldn or CNEL dBA						
	50-55	55-60	60-65	65-70	70-75	75-80	80-85
	Conditionally Acceptable: New construction/development undertaken only after detailed analysis of noise reduction requirements and needed noise insulation features. Conventional construction with closed windows and fresh air supply systems or air conditioning will normally suffice.						
	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.						
	Clearly Unacceptable: New construction or development should generally not be undertaken.						

Notes:

A. Normalized Noise Exposure Information Desired Where sufficient data exists, evaluate land use suitability with respect to a "normalized" value of CNEL or Ldn. Normalized values are obtained by adding or subtracting the constants described in Table I to the measured or calculated value of CNEL or Ldn.

B. Noise Source Characteristics The land use-noise compatibility recommendations should be viewed in relation to the specific source of the noise. For example, aircraft and railroad noise is normally made up of higher single noise events than auto traffic but occurs less frequently. Therefore, different sources yielding the same composite noise exposure do not necessarily create the same noise environment. The State Aeronautics Act uses 65 dB CNEL as the criterion which airports must eventually meet to protect existing residential communities from unacceptable exposure to aircraft noise. In order to facilitate the purposes of the Act, one of which is to encourage land uses compatible with the 65 dB CNEL criterion wherever possible, and in order to facilitate the ability of airports to comply with the Act, residential uses located in Community Noise Exposure Areas greater than 65 dB should be discouraged and considered located within normally unacceptable areas.

C. Suitable Interior Environments One objective of locating residential units relative to a known noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL of Ldn. This requirement, coupled with the measured or calculated noise reduction performance of the type of structure under consideration, should govern the minimum accept• able distance to a noise source.

D. Acceptable Outdoor Environments Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typically below the maximum considered "normally acceptable" for that land use category, may be appropriate.

Section 18.28.030 of the City of Dixon Municipal Code contains noise performance standards for various zoning districts, as shown in Table 6. Table 7 contains the correction factors to the performance standards.

Table 6 Noise Performance Standards

Zoning District	Maximum Sound Pressure Level Decibels, dB
Residential and Medical Districts	55
Multifamily Residential Districts	60
"C" Districts	70
"M" Districts	75

Source: Dixon Municipal Code, Section 18.28.030

Table 7 Noise Performance Standards – Correction Factors

Zoning District	Correction in Maximum Permitted Decibels, dB
Emission only between 7:00 a.m. and 10:00 p.m.	+5
Noise of unusual impulsive character	-5
Nosie of unusual periodic character	-5

Source: Dixon Municipal Code, Section 18.28.040
Note: The following correction factors, when applicable, shall be applied to the maximum sound pressure levels given in DMC 18.28.030

The following are exceptions the Dixon's noise performance standards:

- Time signals produced by places of employment or worship and school recess signals providing no one (1) sound exceeds five (5) seconds in duration and no one (1) series of sounds exceeds twenty-four (24) seconds in duration;
- Devotional and patriotic music of worship, provided such music is emitted only between the hours of 7:00 a.m. and 10:00 p.m.;
- Sounds from transportation equipment used exclusively in the movement of goods and people to and from a given premises, temporary construction or demolition work; and
- Sounds made in the interests of public safety.

Impact Analysis

Would the Proposed Project:

Environmental Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circum-stances Requiring Major EIR Revisions	New Information Showing New or Increased Significant Effects	Less Than Significant Impact/No Changes or New Information Requiring Preparation of an EIR	No Impact
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 in other applicable local, state, or federal standards?				X	
b) Generation of excessive groundborne vibration or groundborne noise levels?				X	
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?					X

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 in other applicable local, state, or federal standards?

Short Term Construction

As discussed in the 1995 Certified EIR, temporary construction activities could generate noise levels up to 89 dBA at a distance of 50 feet. However, the City of Dixon Municipal Code exempts temporary construction and demolition work from its noise performance standards. Mitigation Measures N-A and N-B would continue to apply to the proposed project. Implementation of the Proposed Project would not result in increasing the severity or introduce new significant construction noise impacts.

Operation

The Proposed Project is a permitted use under the current zoning designation and, therefore, it is assumed that growth associated with the Proposed Project would be the same as what was analyzed in the 1995 Certified EIR. According to the traffic assessment prepared for the Proposed Project, implementation of the Proposed Project would generate 1,001 daily trips. It is assumed that the majority of these trips would be on I-80 and along Lincoln Highway/SR-113 between I-80 and the Proposed Project. There are no sensitive receptors along Lincoln Highway/SR-113 between I-80 and the Proposed Project. According to Caltrans, I-80 along this corridor has an average daily traffic volume of 130,200 (Caltrans 2019). According to the traffic assessment, the difference between the approved daily trips from the 1995 Certified EIR and the existing developed uses is 86,407. The Proposed Project with 1,001 daily trips would add a relatively small portion to the remaining trip budget. When compared with traffic volumes on I-80, implementation of the project would add less than 0.1 dBA at receptors along I-80. Changes of 1 to 3 dBA are detectable under quiet, controlled conditions, and changes of less than 1 dBA are usually not discernible (even under ideal conditions). A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernible to most people in an exterior environment. Therefore, implementation of the Proposed Project would not result in increasing the severity or introduce new significant traffic noise impacts.

The 1995 Certified did not analyze the potential impact of noise from loading docks. Major noise sources associated with truck loading includes airbrake discharge, king-pin coupling, back-up warning 'beep' tone, and drive-off. Reference noise levels for a single heavy-duty truck are shown in Table 8, *Heavy-Duty Truck Movement Noise*, in several different noise metrics.

Table 8 Heavy-Duty Truck Movement Noise

	L50	L25	L8	L2	Lmax
Reference Level (1 Heavy Duty Truck at 50 feet)	40 dBA	42 dBA	53 dBA	54 dBA	75 dBA

Reference noise levels from PlaceWorks, 2012, City of Industry- Macy's Trucking Yard Noise Survey (Trailer Hook-up Simulation)

As shown in Table 8, project-related truck operations may result in instantaneous maximum noise levels of up to 75 dBA L_{max} at 50 feet. The nearest sensitive receptor is a residence on agricultural land to the southeast of the project site. Based on the project site plans, the closest proposed loading dock to the residential/agricultural property line to the southeast would be located at a distance of approximately 500 feet or greater. At this distance, noise from loading dock activity from attenuate to 55 dBA or less, which would not exceed the City standard for residences and this impact would be less than significant.

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

The 1995 Certified did not analyze the potential impact of vibration. The proposed project would not be a source of long-term operational vibration since it does not propose vibration-intensive uses such as rail of heavy mahchinery.

Construction activities generate varying degrees of ground vibration, depending on the construction procedures, construction equipment used, and proximity to vibration-sensitive uses. The generation of vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight damage at the highest levels. Table 9 lists reference vibration levels for different types of commonly used construction equipment.

The term "architectural damage" is defined as minor surface cracks (in plaster, drywall, tile, or stucco) or the sticking of doors and windows. This is below the severity of "structural damage," which compromises structural soundness or threatens the basic integrity of the building shell. Building damage is typically not a concern for most projects, with the occasional exception of blasting and pile driving during construction (FTA 2018). No blasting, pile driving, or rock-crushing activities will be required during project construction. Since vibration-induced architectural damage could result from an instantaneous vibration event, distances are measured from the receptor façade to the nearest location of potential construction activities.

For reference, a peak particle velocity (PPV) of 0.2 inch/second (in/sec) is used as the limit for non-engineered timber and masonry buildings (FTA 2018). Beyond 25 feet, construction-generated vibration levels would be less than the 0.2 in/sec PPV vibration damage criterion. There are no buildings or other sensitive structures within 25 feet of the proposed project; therefore, this impact would be less than significant.

Table 9 Vibration Source Levels for Common Construction Equipment

	Peak Particle Velocity (in/sec)
Equipment	**25 feet**
Vibratory Roller	0.21
Small Bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large Bulldozer	0.089

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, September 2018

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?

The Project is not located within an airport land use plan and there are no public airports or private airstrips within 2 miles of the Project. The nearest airport is University Airport, approximately 4 miles northeast of the Project site. The nearest private airstrip is the Maine Prairie Airport, approximately 6.5 miles south of the Project site. The project would not expose people residing or working in the project area to excessive noise levels, therefore no impact would occur.

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Appendices

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Appendix D Traffic Impact Summary

Appendices

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	Acres	FAR	Approved Project	Developed	Remaining Development Capacity	Proposed Project			
							MODEL THIS	MODEL THIS	
Highway Commercial	142.2	0.25	1,548,600	220,000	1,328,600		1548.6	220	1328.6
Community Commercial	51.9	0.25	565,200	4,400	560,800		565.2	4.4	560.8
Professional Office	105.4	0.30	1,377,000		1,377,000		1377		1377
Light Industrial	214.4	0.25	2,334,800	62,300	2,272,500	502,000	2334.8	62.3	2272.5
ROW/Open Space	129.1				0		0		
	643		5,825,600	286,700	5,538,900	502,000			

Figures from City of Dixon

Table 1 Trip Generation Land Use Correspondance

LAND USE	EXISING USE	ITE LU	ITE Code
Highway Commercial (HC)			
	Walmart Supercenter	Free-Standing Discount Superstore	813
	Wendy's	Fast-Food Restaurant w/ Drive-Through Window	934
	Retail (Various)	Shopping Center	820
	Fast Food w/o Drive Through	Fast-Food Restaurant w/o Drive-Through Window	933
Community Commercial (CC)			
	Panda Express	Fast-Food Restaurant w/ Drive-Through Window	934
	Starbucks	Coffee/Donut Shop with Drive-Through Window	937
Light Industrial (PI)	(Various)	General Light Industrial	110

ITE Land Use & Codes, per the ITE Trip Generation Manual 10th Edition.

Table 2 Trip Generation Rates

Land Use	ITE Code	Unit[2]	Trip Generation[1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Free-Standing Discount Superstore	813	TSF	50.70	1.04	0.81	1.85	2.12	2.21	4.33
Shopping Center	820	TSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81
Fast-Food Restaurant w/o Drive-Through Window	933	TSF	346.23	15.06	10.04	25.10	14.17	14.17	28.34
Fast-Food Restaurant w/ Drive-Through Window	934	TSF	470.95	20.50	19.69	40.19	16.99	15.68	32.67
Coffee/Donut Shop with Drive-Through Window	937	TSF	820.38	45.38	43.61	88.99	21.69	21.69	43.38
General Light Industrial	110	TSF	4.96	0.62	0.08	0.70	0.08	0.55	0.63

[1] Trip generation rates for peak hour of adjacent streets, per the ITE Trip Generation Manual 10th Edition.

[2] TSF=thousand square feet.

Table 3 Trip Generation for Developed Uses

Land Use	Existing Use	Land Use Type	ITE Land Use Code	Land Use Area	Units[2]	Trip Generation[1]						
						Daily	AM Peak Hour			PM Peak Hour		
							In	Out	Total	In	Out	Total
Highway Commercial (HC)												
	Walmart Supercenter	Free-Standing Discount Superstore	813	190.0	TSF	9,633	197	155	352	403	420	823
	Retail (Various)	Shopping Center	820	11.6	TSF	438	7	4	11	21	23	44
	Wendy's	Fast-Food Restaurant w/ Drive-Through Window	934	10.8	TSF	5,086	221	213	434	183	169	352
	Fast Food w/o Drive-Thru	Fast-Food Restaurant w/o Drive-Through Window	933	7.6	TSF	2,631	114	76	190	108	108	216
			Passby trips			-6,801	-227	-191	-418	-270	-268	-538
			SUBTOTAL	**220.0**	TSF	**10,987**	**312**	**257**	**569**	**445**	**452**	**897**
Community Commercial												
	Panda Express	Fast-Food Restaurant w/ Drive-Through Window	934	2.2	TSF	1,036	45	44	89	38	35	73
	Starbucks	Coffee/Donut Shop with Drive-Through Window	937	2.2	TSF	1,805	100	96	196	48	48	96
			Passby trips			-1,421	-73	-70	-143	-43	-42	-85
			SUBTOTAL	**4.4**	TSF	**1,421**	**73**	**70**	**143**	**43**	**42**	**85**
Light Industrial	(Various)	General Light Industrial	110	62.3	TSF	309	39	5	44	5	34	39
			TOTAL	**286.7**	TSF	**12,717**	**423**	**332**	**756**	**493**	**527**	**1,021**

1 Trip generation rates for peak hour of adjacent streets, per the ITE Trip Generation Manual 10th Edition.

2 TSF=thousand square feet.

Passby Trips	Time	Percentage
ITE Code 813	Weekend PM	29%
ITE Code 820	Weekend PM	34%
ITE Code 934	Weekend PM	50%

Table 4 Trips Summary

Land Use	Trip Generation						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Approved per 1994 EIR	99,124	4,933	2,893	7,826	4,139	5,644	9,783
Developed Land Uses	12,717	423	332	756	493	527	1,021
Remaining Trip Budget	**86,407**	**4,510**	**2,561**	**7,070**	**3,646**	**5,117**	**8,762**
Project	**1,001**	**44**	**12**	**56**	**20**	**51**	**71**

ITE TRIP GENERATION RATES[1] (10th Edition)

ITE Code	Land Use	Unit[2]	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
110	General Light Industrial	TSF	4.96	0.62	0.08	0.70	0.08	0.55	0.63
130	Industrial Park	TSF	3.37	0.32	0.08	0.40	0.08	0.32	0.40
140	Manufacturing	TSF	3.93	0.48	0.14	0.62	0.21	0.46	0.67
150	Warehousing	TSF	1.74	0.13	0.04	0.17	0.05	0.14	0.19
151	Mini-Warehouse	TSF	1.51	0.06	0.04	0.10	0.08	0.09	0.17
154	High Cube Transload and Short-term Storage W	TSF	1.40	0.06	0.02	0.08	0.03	0.07	0.10
160	Data Center	TSF	0.99	0.06	0.05	0.11	0.03	0.06	0.09

[1] Rates for Peak Hour of adjacent streets, per the ITE Trip Generation Manual 10th Edition.

[2] Thousand Square Feet

PCE and Vehicle Mix Rates

Land Use	Passenger Cars	2-Axle Trucks	3-Axle Trucks	4+Axle Trucks	Description
Light Warehouse	80.3%	5.2%	4.5%	10.0%	Light warehouse mix applies for warehouses of less than 100,000 square feet.
Heavy Warehouse	79.6%	3.5%	4.6%	12.3%	Heavy warehouse mix applies for warehouses of greater than 100,000 square feet.
Light Industrial	78.6%	8.0%	3.9%	9.5%	Light industrial mix applies for facilities that employ fewer than 500 persons and have an emphasis on activities other than manufacturing.
Heavy Indsutrial	61.2%	6.1%	12.7%	19.9%	Heavy industrial mix applies for facilities that have a high number of employees per industiral plant and could also be categorized as manufacturing facilities.
High Cube Warehouse - Transload	70.0%	7.0%	7.0%	16.0%	Industrial park mix applies for areas containing a number of industrial or related facilities.
PCE Factor	1.0	1.5	2.0	3.0	

[1] Vehicle mix based on SCAQMD High Cube Study.

[2] PCE conversion factor based on Sandbag TIA guidelines.

SF	ITE	PCE
502,000	Land Use	Land Use
TSF	ad and Short-term Cube Warehouse - Transload	
502		

Table 1 Trip Generation Rates

Land Use	ITE Code	Unit[2]	Trip Generation[1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
High Cube Transload and Short-term Stora	154	TSF	1.4	0.06	0.02	0.08	0.03	0.07	0.10

[1] Trip generation rates for peak hour of adjacent streets, per the ITE Trip Generation Manual 10th Edition.

[2] Thousand Square Feet

Table 2 Project Trip Generation

Land Use	TSF	Trip Generation[1]						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Project Trips (Vehicles)	502	703	31	9	40	14	36	50
Project Trips (PCE)	502	1,001	44	12	56	20	51	71

[1] Trip generation rates for peak hour of adjacent streets, per the ITE Trip Generation Manual 10th Edition.

Table 3 Vehicle Mix and PCE Factors

	Type of Vehicle[1]					
	Passenger Car	2-Axle Truck	3-Axle Truck	4+ Axle Truck	Total Truck	Total
High Cube Warehouse - Transload[3]	70.0%	7.0%	7.0%	16.0%	30.0%	100%
PCE Factor[2]	1.0	1.5	2.0	3.0		

[1] Vehicle mix source:SCAQMD High Cube Warehouse Trip Generation Study 2016.

[2] Passenger Car Equivalent factors are recommended by the San Bernardino Associated Governments (Sanbag 2005).

[3] Industrial park mix applies for areas containing a number of industrial or related facilities.

Non-PCE Project Trip Generation

Land Use	Trip Generation Daily
Project Trips (Vehicles)	703
Passenger Cars	492
2-Axle (Non-PCE)	49
3-Axle (Non-PCE)	49
4+ (Non-PCE)	112
Project Trips (Non-PCE)	702

Appendices

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Appendix E Biological Memo

January 29, 2019

Mr. Mark Teague
Placeworks
101 Parkshore Drive
Folsom, California 95630

RE: East Dorset Drive Property, Solano County, California – Preliminary Biological Resources Assessment

Dear Mr. Teague:

At your request, ECORP Consulting, Inc. conducted a preliminary biological resources assessment (BRA) for the ±39.7-acre Dorset Drive Industrial Development Project (Project) (Assessor Parcel Numbers 0111-190-010, 0111-080-011, and 0111-190-030), located in the city of Dixon, Solano County, California. The purpose of the assessment was to collect information on the biological resources present or with the potential to occur within the Project, assess potential biological impacts related to Project activities, and identify possible mitigation measures to inform the Project's California Environmental Quality Act (CEQA) documentation for biological resources.

PROPERTY LOCATION

The Project is located at the northeast corner of Dorset Drive east of North First Street (also known as Highway 113) (Figure 1. *Project Location and Vicinity*). The site corresponds to a portion of Section 12, Township 7 north, Range 4 east (Mount Diablo Baseline and Meridian) of the "Dixon, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 1983). The approximate center of the site is located at latitude 38.471413° (NAD83) and longitude -121.815535° (NAD83) within the Lower Sacramento Watershed (Hydrologic Unit Code #18020163) (Natural Resources Conservation Service [NRCS], USGS, and U.S. Environmental Protection Agency [USEPA] 2017).

This assessment includes information generated from a reconnaissance-level site assessment and does not include a wetland delineation performed according to U.S. Army Corps of Engineers' (USACE's) standards, nor does it include determinate field surveys for special-status plant and animal species. This assessment includes a preliminary analysis of impacts on biological resources anticipated to result from the Project as presently defined. The mitigation recommendations presented in this assessment are based on a preliminary impact analysis, review of existing literature, and the results of the site reconnaissance survey.

METHODS

ECORP Senior Biologist Keith Kwan conducted a reconnaissance-level site assessment on January 21, 2019. The findings of this site assessment have been incorporated into this BRA. In addition, the following

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resources were reviewed to determine the special-status species that had been previously documented within or in the vicinity of the Project area:

- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) data for the Project site as well as a five-mile radius surrounding the Project site (CDFW 2018);
- California Native Plant Society's (CNPS') electronic *Inventory of Rare and Endangered Plants of California* for the "Dixon, California" 7.5-minute quadrangle and nine surrounding USGS quadrangles (CNPS 2019).
- U.S. Fish and Wildlife Service (USFWS) IPaC resource list (USFWS 2019).

EXISTING SITE CONDITIONS

The Project is composed of mostly farmland with a detention pond in the eastern portion of the Project and a weedy/ruderal area on the western portion of the Project. The farmed land appears to be farmed with winter oats (*Avena sativa*) or wheat (*Triticum aestivum*). The detention pond is constructed to capture storm water runoff from adjacent development, and does not have an outlet. There was no standing water within the detention pond observed during the site assessment. One small Goodding's black willow (*Salix gooddingii*) and a Fremont's cottonwood (*Populus fremontii*) are located within the detention pond, and scattered coyote brush (*Baccharis pilularis*) shrubs are found on the upper slopes of the detention pond. The weedy/ruderal area is located immediately north of Walmart and is made up of highly disturbed and compacted soil and remnant asphalt.

According to the *Web Soil Survey* (NRCS 2019), there are three soil units mapped within the Project (Figure 2. *Natural Resources Conservation Service Soil Units*). These are: (Ca) Capay silty clay loam; (Yo) Yolo loam, 0 to 4 percent slopes (MLRA 17); and (Ys) Yolo silty clay loam, 0 to 2 percent slopes (MLRA 17).

AQUATIC RESOURCES/POTENTIAL WATERS OF THE U.S.

The detention pond supports small sparsely distributed patches of wetland vegetation. It is a constructed feature designed to capture storm water runoff and there is no outlet or hydrologic connection to an existing Water of the U.S. Therefore, it is not likely to be considered jurisdictional. There are no other aquatic features present onsite. In addition, there are no previously mapped aquatic features for this location (Figure 3. *California Aquatic Resources Inventory*).

SPECIAL-STATUS SPECIES

Plants

There is no habitat onsite for potentially occurring special-status plants due to the highly disturbed nature of the Project site. The agricultural fields are annually plowed and harvested, and the detention pond is a constructed feature. Further, fluctuating water levels from agricultural and urban stormwater runoff preclude the potential for special-status plant occurrence within the detention pond.

Special-Status Invertebrates/Fish/Amphibians/Reptiles/Mammals

There is no potential for special-status invertebrates, fish, amphibians, reptiles, or mammals onsite due to the absence of suitable habitat, highly disturbed nature of the Project area and surrounding agricultural landscape.

Birds

During the site assessment, one burrowing owl (*Athene cunicularia*) was found occupying a burrow on the western slope of the detention pond. It is unknown based on this observation whether this individual is wintering or a resident, and potentially breeding at this location. In addition, according to the CNDDB, there are two occurrences of Swainson's hawk (*Buteo swainsoni)* nesting in the walnut trees along the northern boundary of the Project site (CNDDB Swainson's hawk occurrences #833 and #1163) (CDFW 2018). While bird nesting habitat is limited due to the disturbed nature of the Project, there is suitable nesting habitat for other special-status birds and those that are protected under the Federal Migratory Bird Treaty Act (MBTA). These include white-tailed kite (*Elanus leucurus*) and loggerhead shrike (*Lanius ludovicianus*). The Goodding's black willow, Fremont's cottonwood trees, and coyote brush shrubs found on the slopes of and within the detention pond represent potential nesting habitat for these species. The agricultural fields onsite also represent suitable foraging habitat for Swainson's hawk, and other raptors.

RECOMMENDATIONS

This section provides possible measures to avoid, minimize, or compensate for potential impacts to biological resources from the proposed Project. Mitigation recommendations are provided, but may not be necessary should impacts be determined less than significant in the CEQA analysis.

The detention pond supports some wetland characteristics. While this feature is not likely to be jurisdictional, the City of Dixon may require a jurisdictional determination by the USACE to verify as such.

The Project site is heavily disturbed with no native habitat or unaltered vegetation communities that can support potentially occurring special-status invertebrates, plants, fish, amphibians, reptiles, and mammals. No avoidance or mitigation measures are recommended pertaining to these taxa.

Special-Status and MBTA Birds

Burrowing Owl

One burrowing owl was found onsite during the site assessment. As a result, pre-construction surveys will likely be required. If burrowing owls are found occupying the site during the non-breeding season (September 1 through January 31), the owls could be excluded in accordance with CDFW protocol (e.g., passive relocation). Passive relocation is generally not permitted during the breeding season (February 1 through August 31); a no-disturbance buffer will likely be required around the occupied burrow during the breeding season. This radius will be maintained until a qualified biologist has determined that the nestlings have fledged.

Swainson's Hawk

There is suitable Swainson's hawk nesting habitat immediately adjacent to the Project site. As a result, pre-construction surveys within the Project and in the surrounding lands up to a 0.5-mile radius will likely be required. If an active Swainson's hawk nest is found, avoidance measures during the active nesting season could be required and/or a California Endangered Species Act Section 2081 Incidental Take Permit may be required, depending upon the distance of the active nest to the Project.

The Project site also supports suitable Swainson's hawk foraging habitat, and impacts resulting from Project development would likely be considered significant. Mitigation would likely include a 1:1 preservation ratio through either a) mitigation fee payment to a CDFW-approved mitigation bank or similar habitat development and management company, or the City of Dixon through a negotiated agreement (subject to CDFW approval) or b) purchase of conservation easements or fee title on lands with suitable Swainson's hawk foraging habitat (consistent with CDFW guidelines).

Other MBTA Birds

All nongame native birds (resident and migratory) and the nests and eggs of all birds are protected under the California Fish and Game Code (§§ 3800, 3813, and 3503) and all migratory birds are protected under the federal MBTA. As such, to ensure that there are no impacts to protected birds, the following measures may be required:

- During the nesting season (approximately February 1 to August 31) conduct a pre-construction nesting bird survey of suitable habitats within the Project. If active nests are found, a no-disturbance buffer should be established around the nest. The buffer distance should be established by a qualified biologist in consultation with CDFW. The buffer should be maintained until the fledglings are capable of flight and become independent of the nest tree/shrub, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures would be necessary.

Please feel free to call me or Lourdes Gonzalez-Peralta at (916) 782-9100 if you have any questions regarding this BRA.

Sincerely,

Keith Kwan
Senior Biologist

REFERENCES

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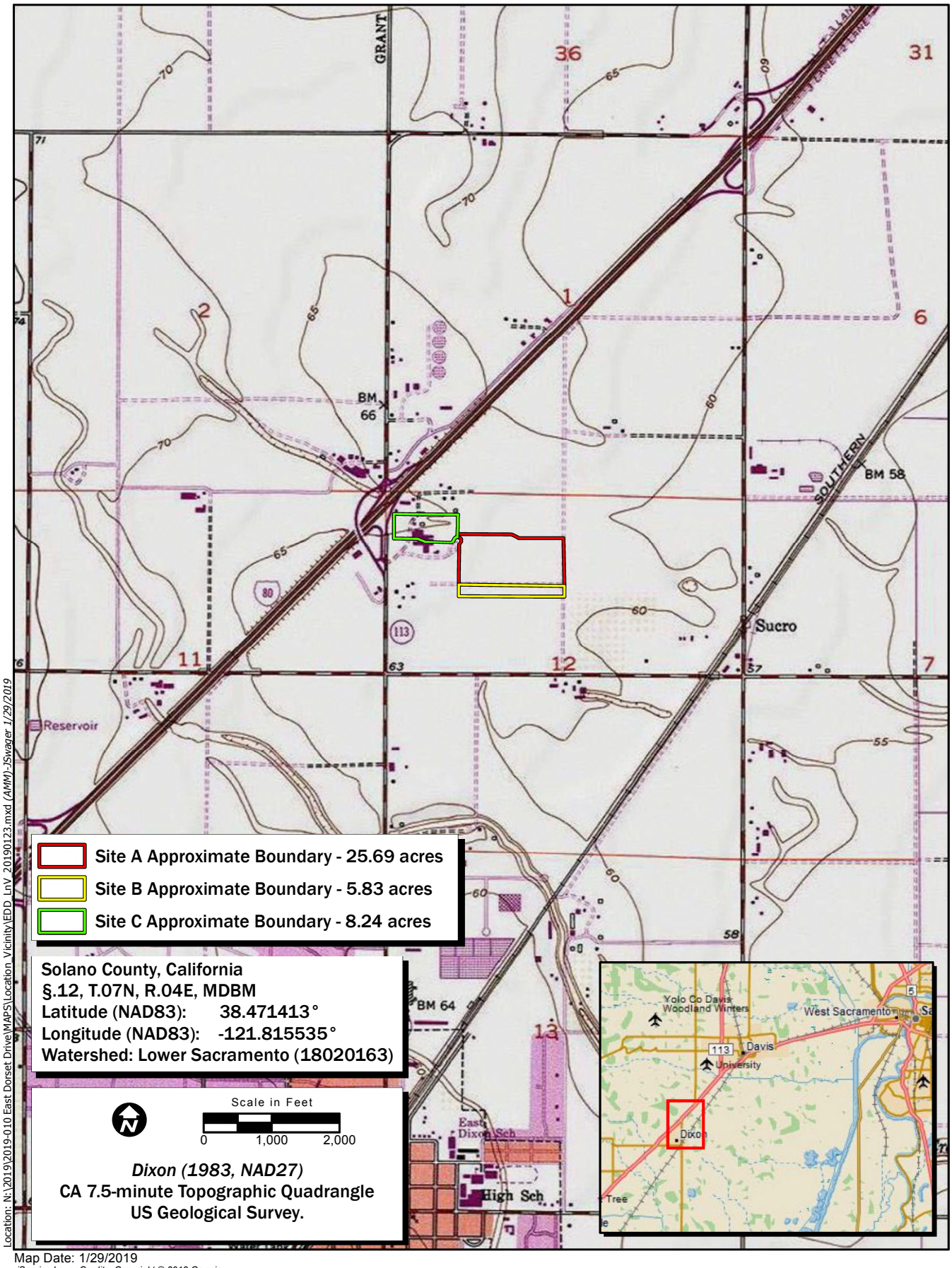
LIST OF FIGURES



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Map Date: 1/29/2019

Figure 1. Project Location and Vicinity

2019-010 East Dorset Drive

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

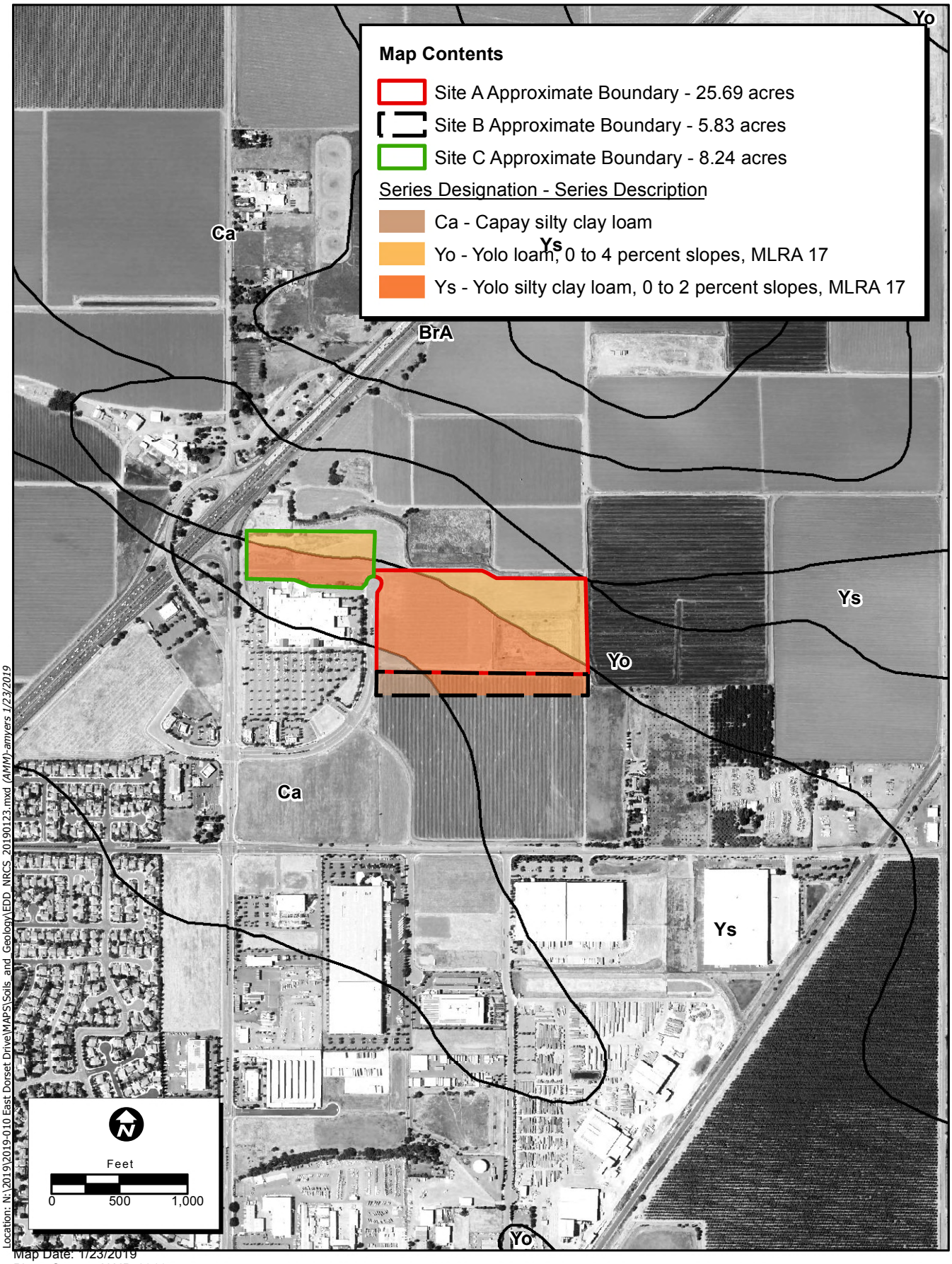

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Photo Source: NAIP, 2016

Figure 2. Natural Resources Conservation Service Soil Units

2019-010 East Dorset Drive

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Photo Source: NAIP, 2016

Figure 3. California Aquatic Resources Inventory

Appendices

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