

Jay Willard Gymnasium Replacement Project

Initial Study

prepared by
Eureka City Schools
2100 J Street
Eureka, California 95501

prepared with the assistance of
Rincon Consultants
4825 J Street, Suite 200
Sacramento, California 95816

Rincon Consultants, Inc.
Environmental Scientists Planners Engineers
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January 2017

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Initial Study

1 Project Title

Jay Willard Gymnasium Replacement Project

2 Lead Agency Name and Address

Eureka City Schools
2100 J Street
Eureka, California 95501

3 Contact Person and Phone Number

Fred Van Vleck, Ed. D., Superintendent, Eureka City Schools

(707) 441-2414

4 Project Sponsor's Name and Address

Eureka City Schools
2100 J Street
Eureka, California 95501

5 Project Location

The project site consists of an approximately 3.8-acre area located on the campus of Eureka High School at 1915 J Street in the City of Eureka in Humboldt County, California. The project site lies in the southern portion of campus and is bounded by Trinity Street and existing tennis courts to the south, the school cafeteria, an existing classroom building, and parking lot to the north, J Street to the west, and vegetation to the east. The Assessor Parcel Number (APN) for Eureka High School, including the project site, is 011-131-005. Figure 1 shows the regional location of the project site and Figure 2 shows the project location in its neighborhood context.

6 Existing Setting

The project site currently encompasses three distinct campus areas (see Figure 2):

1) **Existing gym and surrounding paved surface lot.** This area is located north of the school tennis courts and south of a school classroom building and is bound by K Street to the west and vegetation to the east. The paved surface lot surrounding the existing Jay Willard Gymnasium provides parking for gymnasium use and sports events.

2) **Block west of the existing gym.** This block is bounded by Humboldt Street and Trinity Street to the north and south, and J Street and K Street to the west and east. This area is currently a painted paved lot used for recreation that also provides parking for gymnasium use and sports events. The only existing structures on this block consist of a bungalow in the southeast corner that is used as a classroom, and a large storage bin in the southwest corner. The bungalow

classroom would be retained and the replacement gym would be built to the north of the classroom.

3) **Bus lane**. The bus lane runs north along K Street and west along Humboldt Street, and exits onto J Street. School buses utilize this area for student drop off and pick up; eight buses drop off in the morning and nine buses pick up in the afternoon. The bus lane also provides vehicle access to parking on the surface lots adjacent to K Street. The bus lane is a private road owned by Eureka City Schools.

The existing gymnasium is a 40,075-square-foot (sf) structure that occupies about one acre on a paved surface lot. The gymnasium is a one-story, flat-roofed, concrete-framed building with three distinct wings that was first constructed in 1948. The Main Gymnasium Wing is the northernmost wing and contains the main gymnasium space with basketball courts and seating; it is the largest volume of the building with a height of approximately 36 feet. This portion of the gymnasium is set back from K Street and has parking spaces in front. The Swimming Pool Wing lies to the southeast and is slightly lower in height. It contains a swimming pool that has been permanently drained and closed since 2009, as well as the girls' locker rooms. The Secondary Gymnasium Wing lies to the southwest of the main wing and abuts K Street. It includes a second gymnasium space and weight room. Figure 3 shows photos of the project site and gymnasium interior.

7 Surrounding Land Uses and Setting

The project site is directly adjacent to other school facilities and residences. To the west across J Street lie the Eureka City Schools District Office and Eureka Adult School. To the north across Humboldt Street is the main campus area of Eureka High School and to the northeast is a track and field facility surrounded by vegetation. To the south across Trinity Street and between J and K Street are one-story and two-story single-family residences, and directly south of the existing gymnasium are tennis courts; more one-story and two-story single-family residences lie south of the tennis courts. The surrounding areas are residential with primarily one-story and two-story single family houses. Figure 4 shows photos of the surrounding area.

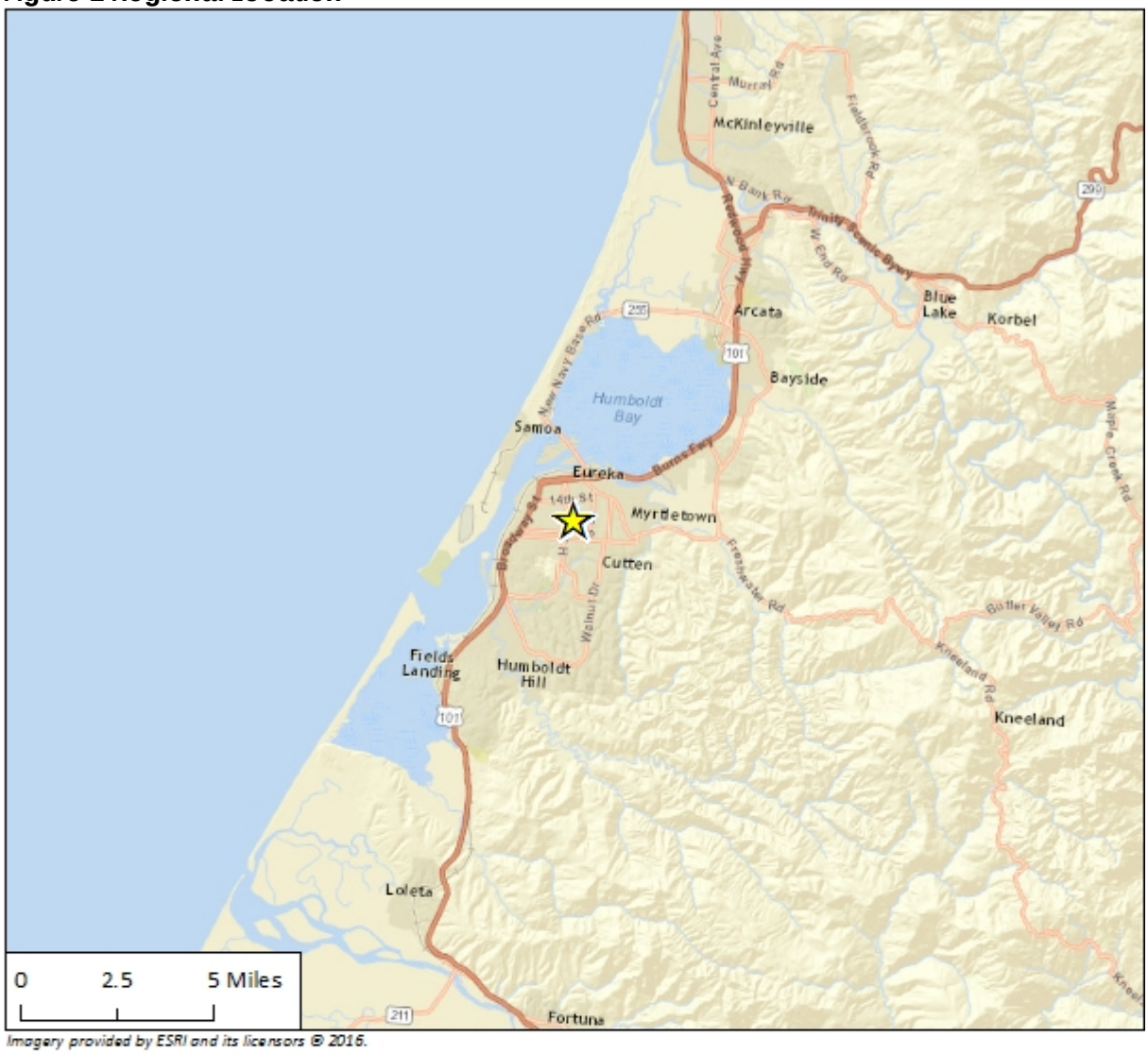
8 General Plan Designation

The project site is designated for Public/Quasi-Public (PQP) land use in the City of Eureka General Plan.

9 Zoning

The project site is zoned by the City of Eureka as a Public District (P) (Municipal Code, Sec. 10-5.107).

Figure 1 Regional Location



Imagery provided by ESRI and its licensors © 2016.

Project Location

N



Fig 1 Regional Location

Figure 2 Project Location



Imagery provided by Google and its licensors © 2016.

Fig 2 Project Location

Figure 3 Site Photos



Photo 1: View looking east across J Street to the site of the replacement gym and existing Jay Willard Gymnasium.



Photo 2: View looking southeast across J Street to the site of the replacement gym, existing Jay Willard Gymnasium, and adjacent residences.



Photo 3: View looking east to the Jay Willard Gymnasium's main gymnasium wing, swimming pool wing, and secondary gymnasium wing.



Photo 4: View looking northeast across K Street to the west façade of the secondary gymnasium wing.

Source: FF & J Architects, Inc. 2016. Eureka High School Gymnasium, Preliminary Historic Assessment & Code Analysis. Prepared by Page & Turnbull. July 12, 2016.

Figure 4 Jay Willard Gymnasium Photos

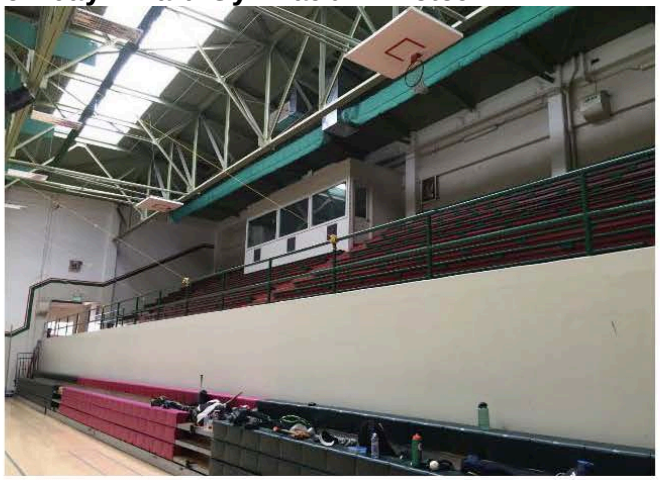


Photo 5: Main gymnasium wing interior, view looking east.

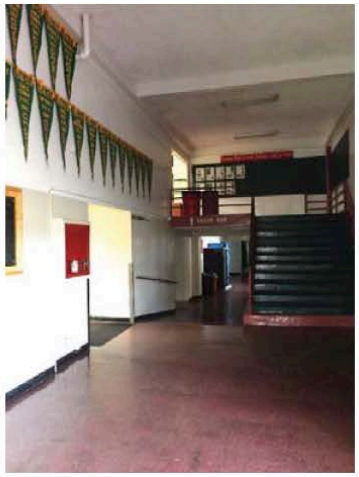


Photo 6: Lobby opening to the main gymnasium and secondary gymnasium and swimming pool wings, view looking south.

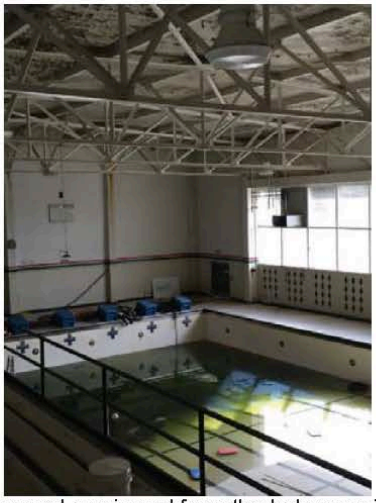


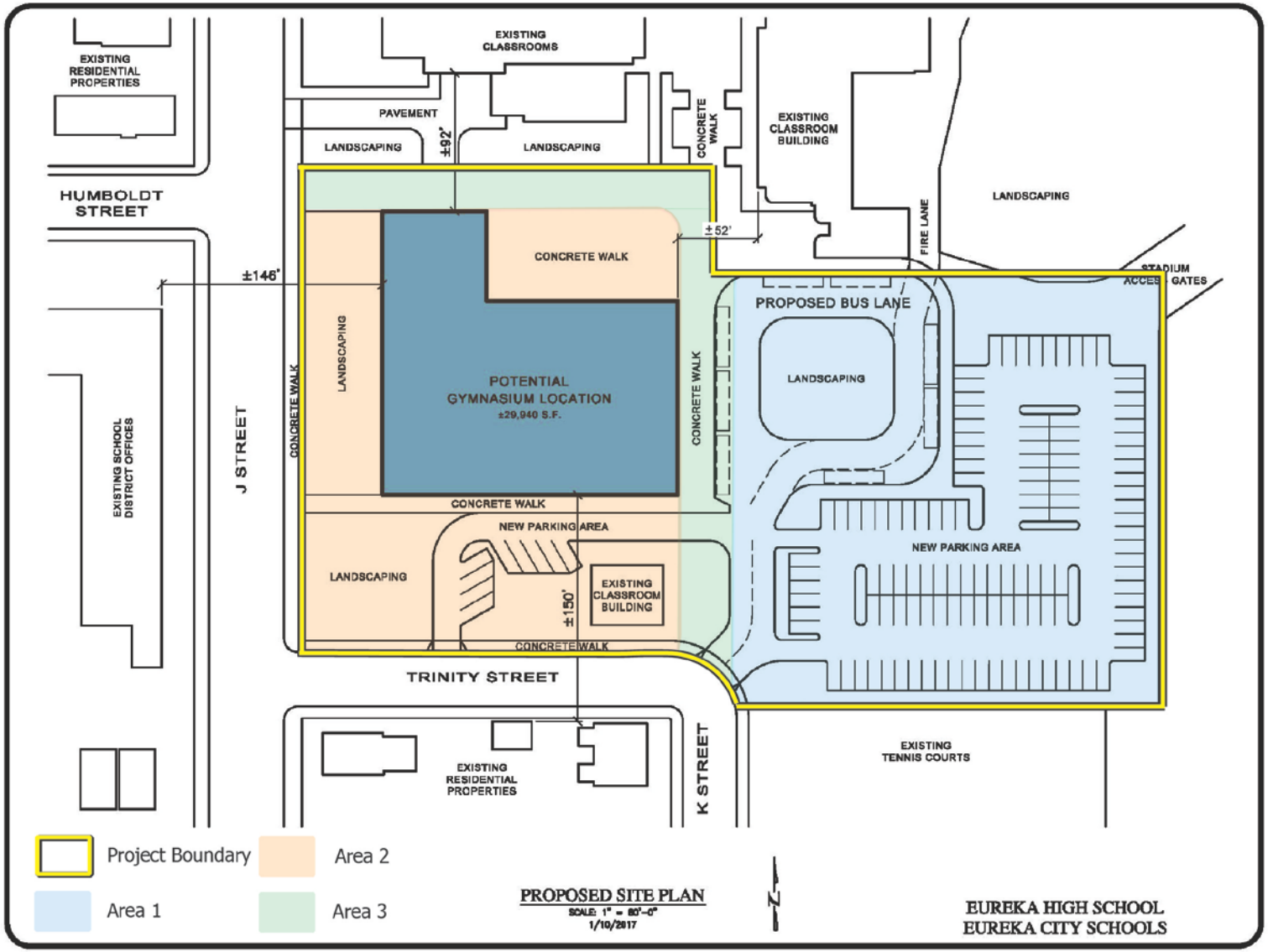
Photo 7: Swimming pool as viewed from the balcony, view looking southeast.



Photo 8: Weight room in the secondary gymnasium wing, view looking south.

Source: FF & J Architects, Inc. 2016. Eureka High School Gymnasium, Preliminary Historic Assessment & Code Analysis. Prepared by Page & Turnbull. July 12, 2016.

Figure 5 Proposed Site Plan



10 Description of Project

Eureka City Schools is proposing to construct a replacement gymnasium on the Eureka High School campus to address concerns regarding the aging state of the existing Jay Willard Gymnasium. The existing gymnasium was constructed in 1948 and retains its 70-year old plumbing system and outdated electrical system breaker boxes. It does not meet current state standards for earthquake safety or American with Disabilities Act (ADA) accessibility requirements.

The proposed project would replace and modernize an existing school gymnasium, as well as reconfigure an existing bus lane and parking areas on the project site to accommodate the new gymnasium and facilitate safe student access. The replacement gymnasium would be smaller in size than the existing facility—approximately 29,940 sf, rather than 40,075 sf—and would be sited to the west of the existing gymnasium. To facilitate safe student access, the existing bus lane would be replaced with a concrete walkway and the bus lane would be rerouted to loop in the area that currently contains the paved surface lot adjacent to the existing gymnasium, as shown in the proposed site plan (Figure 5). The following changes would occur at each of the three campus areas in the project site identified above (see Figure 5):

1) **Existing gym and surrounding paved surface lot.** The existing gym would be demolished and paved over to provide a new parking area that would provide 133 spaces for gymnasium use and sports events, including events at the adjacent track and field facility. This would essentially replace existing parking located in front of the existing gymnasium and in the block to the west. Much of the area that is currently a paved surface lot would be transformed into a bus lane that would loop around a landscape element. Vehicles would access the new parking area and the bus loop via a driveway at the intersection of K Street and Trinity Street along the southern border of the project site, which would serve as both entry and exit. The driveway would provide two access points to the new parking area to the east and an access point to a new parking area to the west (described below) before merging into the bus loop. The proposed bus lane would provide access to the existing fire lane north of the project site (see Figure 5).

2) **Block west of the existing gym.** The existing bungalow classroom would be retained and a small new parking area would be painted directly to the north and west of the classroom that would provide nine parking spaces. The new parking area would be accessed off the driveway at the intersection of K Street and Trinity Street or directly from Trinity Street to the west of the classroom. The replacement gymnasium would be constructed to the north of the new parking area, with a concrete walk dividing the two. A concrete walk would also run along the east and north faces of the proposed gymnasium, providing vehicle-free pedestrian access between classroom uses, existing campus walkways, the gymnasium, and the bus loop.

3) **Bus lane**. The bus lane would be removed and the area integrated into the other uses on the project described above (i.e., concrete walkways, driveway, and bus loop).

Construction

The construction timeframe for the proposed project has not yet been determined. For the purpose of this analysis, it is assumed that construction would occur over about 13 months based on emission model defaults (see Section 3, Air Quality) and would involve:

- site preparation and grading at the replacement gymnasium site,
- building construction of the replacement gymnasium and paving of new parking areas,

- reconfiguration of the bus lane and construction of new concrete walkways, and
- demolition of the existing gymnasium.

11 Required Approvals

The project would require approval by the Eureka City Schools Board of Education, as well as the Office of Public School Construction (OPSC) and Division of the State Architect, both under the California Department of General Services No other permits or approvals would be required at this time.

12 Other Public Agencies Whose Approval is Required

Eureka City Schools is the lead agency with responsibility for approving the proposed project. In addition, the following additional approvals would be required by the Department of Education, School Facilities & Transportation Services Planning Division:

- Preliminary and Final Plan Approval
- Allocation of Construction Funding

13 California Native American Tribe Consultation

Tribal consultation, if requested as provided in Public Resources Code Section 21080.3.1, must begin prior to release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. Information provided through tribal consultation may inform the lead agency's assessment as to whether tribal cultural resources are present, and the significance of any potential impacts to such resources. Prior to beginning consultation, lead agencies may request information from the Native American Heritage Commission regarding its Sacred Lands File, per Public Resources Code sections 5097.9 and 5097.94, as well as the California Historical Resources Information System administered by the California Office of Historic Preservation. Tribal consultation for the proposed project has been initiated in November 2016. The Wiyot tribe has requested consultation with Eureka City Schools and has been contacted for consultation.

Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forest Resources	☐ Air Quality
☐ Biological Resources	■ Cultural Resources	☐ Geology and Soils
☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials	☐ Hydrology / Water Quality
☐ Land Use/ Planning	☐ Mineral Resources	■ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
■ Transportation / Traffic	■ Tribal Cultural Resources	☐ Utilities / Service Systems
☐ Mandatory Findings of Significance		

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

■ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date _____

Printed Name _____ Title _____

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project have any of the following impacts?				
a. Substantial adverse effect on a scenic vista	☐	☐	☐	■
b. Substantial damage to scenic resources, including but not limited to trees, rock outcroppings, and historic buildings along a state scenic highway	☐	☐	☐	■
c. Substantially degrade the existing visual character or quality of the site and its surroundings	☐	☐	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area	☐	☐	■	☐

a. Would the project have a substantial adverse effect on a scenic vista?

The project site is located on the southern end of the Eureka High School campus and approximately 1.3 miles south of the ocean. The Land Use and Community Design section of the City of Eureka General Plan establishes a goal of maintaining and expanding views of the waterfront, inner harbor, and landmark buildings from public streets and other public spaces (Goal 1.H). The project site does not lie in a view corridor to any of these scenic features. Therefore, no scenic vistas would be viewed from the project site or would be obstructed by the proposed project. There would be no impact to scenic vistas.

NO IMPACT

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings in a state scenic highway?

The project site is located nearly a mile from U.S. Highway (US) 101 and State Route (SR) 255. Neither highway is designated a state scenic highway in Humboldt County and the project t would not affect any trees, rock outcroppings, historic buildings, or other identified scenic resources that would be visible from a scenic highway. No impact would occur and further analysis in an EIR is not warranted.

NO IMPACT

c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

The project would involve the demolition of an existing gymnasium, construction of a new gymnasium, creation of new parking areas and new concrete walkways, and rerouting of a bus lane in an area of the

Eureka High School campus that currently includes a gymnasium, parking areas, and a bus lane. Consequently, the proposed project would primarily reconfigure existing elements on the project site with a few minor additions consisting of concrete walkways around the north, east, and south of the new gymnasium and a landscape element (likely mowed grass) at the center of the proposed bus loop. There would be no substantial change in the overall visual character of the site. Rather, the building massing in this portion of the campus would be shifted and result in similar overall visual effects. Impacts would be less than significant and further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project would replace an existing gymnasium with a new gymnasium. The replacement gymnasium would be smaller in size than the existing gymnasium and would be used for physical education instruction, sporting events, and other group congregate events in the same manner as the existing gymnasium. The new gymnasium would be used for indoor activities and would not result in substantial light or glare impacts to adjacent residences located to the south across Trinity Street or to the northwest across Humboldt Street. Consequently, the proposed project would not result in a net increase of light or glare related to gymnasium use.

The proposed project would replace existing parking areas on the project site with new parking areas. As the new parking areas would replace existing parking areas on the project site and serve the same purpose (i.e., provide parking for gymnasium users and sports event attendees), they would not increase vehicle traffic to the project site that could create additional light and glare sources.

In addition, the proposed project would reroute the existing bus lane that currently runs in one direction north along K Street, west along Humboldt Street, and exits onto J Street. The reconfigured bus lane would change the exit route of buses and vehicles accessing the bus pick-up and drop-off areas and adjacent parking areas as the proposed project would require buses and vehicles to exit onto K Street or Trinity Street, rather than onto J Street. However, the level of bus traffic associated with the existing bus lane is minimal—eight school buses drop off students in the morning and nine buses pick up students in the afternoon—and would be limited to specific hours corresponding to the start and end of the school day. In addition, personal vehicle traffic that would require access to the proposed driveway and new parking areas would primarily be generated by sports events. Sports events, such as basketball games, typically occur only once or twice a week in the evenings during the school year (Eureka City Schools 2016). Therefore, vehicle traffic associated with the proposed project would not contribute new sources of substantial light or glare that would adversely affect day or nighttime views in the area. Impacts would be less than significant and further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

2 Agriculture and Forest Resources

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

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project have any of the following impacts?				
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract	☐	☐	☐	■
c. Conflict with existing zoning for or cause rezoning of forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use	☐	☐	☐	■

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

b. *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

c. *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section*

4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

e. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

The project site is not located in or near any designated farmland, agricultural zones or forest lands, as specified in the Land Use and Community Design Element of the General Plan (Eureka 1997). Additionally, no agricultural or forest land resources are present on the project site, as it is part of a fully developed high school campus. The proposed project would have no impact upon agricultural or forest resources and further analysis in an EIR is not warranted.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project have any of the following impacts?				
a. Conflict with or obstruct implementation of the applicable air quality plan	☐	☐	☐	■
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation	☐	☐	■	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)	☐	☐	■	☐
d. Expose sensitive receptors to substantial pollutant concentrations	☐	☐	■	☐
e. Create objectionable odors affecting a substantial number of people	☐	☐	■	☐

The project site is within the North Coast Air Basin (the Basin) under the jurisdiction of the North Coast Unified Air Quality Management District (NCUAQMD). As the local air quality management agency, the NCUAQMD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether or not the standards are met or exceeded, the Basin is classified as being in “attainment” or “nonattainment.” The health effects associated with criteria pollutants upon which attainment of state and federal air quality standards is measured are described in Table 1.

The Basin is designated as non-attainment for the state 24-hour PM_{10} standard (NCUAQMD 2016a). Humboldt County's climate, pollution-trapping mountains and valleys, and growing population, all contribute to the non-attainment status for PM_{10} (HCAOG 2014). The primary sources of particulate matter in the Eureka area are exhaust and dust generated from on-road and off-road vehicles, open burning of vegetation, residential wood stoves, and stationary industrial sources (NCUAQMD 2016). The NCUAQMD prepared an Attainment Plan in 1995 to assess the sources of air pollution, determine reduction targets, and identify control strategies to achieve attainment with state standards. Control strategies identified by the study include transportation control measures (public transit, ridesharing, vehicle buy-back program, traffic flow improvements, bicycle incentives, etc.), land use measures to reduce reliance on automobiles, and open burning measures (NCUAQMD 1995). This document was not a required component of District attainment efforts and was prepared solely to inform NCUAQMD.

Table 1 Health Effects Associated with Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: pulmonary function decrements and localized lung edema in humans and animals, risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Carbon monoxide (CO)	Reduces oxygen delivery leading to: (1) Aggravation of chest pain (angina pectoris) and other aspects of coronary heart disease; (2) decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (3) impairment of central nervous system functions; and (4) possible increased risk to fetuses.
Nitrogen dioxide (NO_2)	(1) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (2) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (3) contribution to atmospheric discoloration.
Sulfur dioxide (SO_2)	(1) Bronchoconstriction accompanied by symptoms that may include wheezing, shortness of breath, and chest tightness during exercise or physical activity in persons with asthma.
Suspended particulate matter (PM_{10})	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma).[1]
Suspended particulate matter ($PM_{2.5}$)	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma.[1]

Source: U.S. EPA 2016

1. More detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the following documents: Office of Environmental Health Hazard Assessment, Particulate Matter Health Effects and Standard Recommendations, www.oehha.ca.gov/air/toxic_contaminants/PM10notice.html#may, May 9, 2002; and EPA, Air Quality Criteria for Particulate Matter, October 2004.

The NCUAQMD has not formally adopted significance thresholds to guide CEQA significance determinations for land development projects (NCUAQMD 2016b). Instead, the District uses the Best Available Control Technology (BACT) emission rates for stationary sources as defined in the NCUAQMD Rule 110 and listed in Table 2 as significance thresholds. For the purpose of this analysis, air quality emissions are considered to have a significant individual and cumulative impact if they exceed the District's significance thresholds for BACT adoption.

Table 2 NCUAQMD Significance Thresholds for BACT Adoption

	Mass Daily Thresholds	
Pollutant	**Daily (pounds/day)**	**Annual (tons/year)**
CO	500	100
Fluorides	15	2
Hydrogen sulfide (H_2S)	50	10
Lead	3.2	0.6
Nitrogen Oxides (NO_x)	50	40
PM_{10}	80	15
$PM_{2.5}$	50	10
Reactive Organic Compounds (ROC)	50	40
Reduced Sulfur Compounds	50	10
Sulfur Oxides	80	40
Sulfuric Acid Mist	35	7
Total Reduced Sulfur Compounds	50	10

Source: Rule 110, NCUAQMD 2015

1. Reactive Organic Compounds (ROC) are formed during combustion and evaporation of organic solvents. ROCs are also referred to as Reactive Organic Gases (ROG) and Volatile Organic Compounds (VOC).

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

A project may be inconsistent with an applicable air quality plan if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the plan. The proposed project would not increase the population because it does not include residential uses, nor would it generate employment growth as it would replace an existing gymnasium and not increase school capacity. Therefore, no impact would occur.

NO IMPACT

b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

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

Because the proposed replacement gymnasium would have the same uses as the existing gymnasium, serve the same student population, and generate approximately the same number of vehicle trips, the proposed project would not result in any net new operational emissions. In fact, the new gymnasium

would likely result in lower operational emissions due to energy and water use efficiency improvements required by current building standards. The existing gymnasium was first constructed over sixty years ago in 1948. In addition, the new gymnasium would be about 25 percent smaller in size than the existing gymnasium (29,940 sf rather than 40,075 sf) and would not include an indoor pool, which is a source of water and energy-use related emissions. Consequently, for the purpose of this analysis, the proposed project is assumed to generate no net new operational emissions. Operational emissions would be less than significant.

Demolition of the existing gymnasium and construction of the replacement gymnasium would, however, generate temporary emissions. To determine whether construction emissions would have significant impacts, emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1. Based on model defaults, it was assumed that construction would occur over a 13-month period. The timing of architectural coating was revised to begin halfway through the start of construction and end one week post-construction, which better reflects standard construction practices. CalEEMod was run assuming demolition of a 40,075-square foot structure, construction of a 29,940-square foot structure, and construction of a surface parking lot with 133 spaces on a 3.8 acre lot. The proposed project emissions were estimated using defaults for a "health club" land use as CalEEMod does not provide "school gymnasium" as an option; a health club offers facilities similar to a high school gymnasium, such as basketball courts, weight rooms and locker rooms, and therefore, would have comparable building construction requirements. In addition, it was assumed the proposed project would divert 50 percent of its waste, as mandated by AB 939, and that diesel engine equipment would meet U.S. EPA Tier 2 emission standards, which went into effect for model years 2006 or earlier (U.S. EPA 1998). CalEEMod outputs, which include modeling assumptions, are provided in Appendix A.

Table 3 Maximum Daily and Annual Construction Emissions

Pollutant	Maximum Daily Emissions (pounds/day)	Daily Significance Threshold (pounds/day)	Maximum Annual Emissions (tons/year)	Annual Significance Threshold (tons/year)	Significant Impact?
CO	26.74	500	1.7	100	No
NO_x	36.60	50	2.1	40	No
PM_{10}	9.23	80	0.1	15	No
$PM_{2.5}$	5.46	50	0.1	10	No
ROCs	7.15	50	0.5	40	No
SO_x	0.048*	80	<0.01	40	No

Sources: Appendix A (CalEEMod outputs); Rule 110, NCUAQMD 2015 (significance thresholds).

* CalEEMod provides estimated emissions for SO_2, which is the predominant form of SO_x emitted.

Table 3 shows the estimated construction emissions generated by the proposed project and NCUAQMD recommended significance thresholds for applicable criteria pollutants. Emissions of fluorides, lead, and sulfuric acid mist are associated with industrial sources, while hydrogen sulfide emissions are associated with sewage and manure; lead is also associated with aviation fuel. As the proposed project would not be a source of these criteria pollutants, they were not considered in the construction emissions analysis (U.S. EPA 2014). As shown in Table 3, construction emissions for the proposed project would not exceed NCUAQMD recommended significance thresholds. Therefore, the proposed project would not violate or contribute to violation of air quality standards and would not result in a cumulatively considerable

increase in $PM_{10,}$ for which the project region is in non-attainment. Impacts would be less than significant and further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d. Would the project expose sensitive receptors to substantial pollutant concentrations?

Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Sensitive receptors are defined as land uses that are more likely to be used by these population groups and include health care facilities, retirement homes, school and playground facilities, and residential areas. The project site is adjacent to a residential neighborhood and is located on a school site in close proximity to school operations. Both the school and the adjacent residences are considered to be sensitive receptors. However, as shown in Table 3, construction emissions from the proposed project would not exceed NCUAQMD significance thresholds and operation emissions would be equivalent to, or below, existing conditions.

The NCUAQMD recommends the use of the latest version of the California Air Pollution Control Officers Association (CAPCOA) "Health Risk Assessments for Proposed Land Use Projects" to assess impacts from toxic air contaminants. Because the proposed project is neither a source of toxic air contaminants, as defined in CAPCOA's guidance document, nor located in the vicinity of a source of toxic air contaminants, a health risk assessment is not required.

Due to the age of the existing gymnasium (over 60 years old), there is the potential for asbestos and lead to be emitted into the air during demolition. Lead-based materials and asbestos exposure are regulated by the California Occupational Safety and Health Administration (Cal OSHA). The California Code of Regulations (CCR), §1532.1, requires testing, monitoring, containment, and disposal of lead-based materials such that exposure levels do not exceed Cal OSHA standards. Under this rule, construction workers may not be exposed to lead at concentrations greater than fifty micrograms per cubic meter of air averaged over an eight-hour period and exposure must be reduced to lower concentrations if the work day exceeds eight hours. Similarly, CCR §1529 sets requirements for asbestos exposure assessments and monitoring, methods of complying with exposure requirements, safety wear, communication of hazards, and medical examination of workers. The NCUAQMD also enforces Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), which regulate the control of asbestos during the renovation and demolition of buildings under the Clean Air Act (CAA) (NCUAQMD 2016c). The CAA requires a thorough inspection for asbestos where demolition will occur and specifies work practices to control emissions, such as removing all asbestos-containing materials, adequately wetting all regulated asbestos-containing materials, sealing the material in leak tight containers and disposing of the asbestos-containing waste material as expediently as practicable (U.S. EPA 2016). Furthermore, demolition would be conducted when school is not in session, as required by mitigation measure N-2 (see Section 12, Noise), which would further reduce the risk that students and staff would be exposed to harmful levels of lead or asbestos.

As the proposed project would not result in emissions exceeding significance thresholds or be a source of toxic air contaminants, and would comply with regulations limiting lead and asbestos emissions and exposure, the project would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant. Further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

e. Would the project create objectionable odors affecting a substantial number of people?

School uses are not considered a land use associated with odor complaints (SCAQMD 1993). In addition, the proposed project would replace an existing gymnasium and would not result in any additional odors

from its operation. Objectionable odors may be generated by the operation of equipment during the construction phases of the proposed project. Odors associated with construction machinery include diesel machinery fumes, such as the smell of oil or diesel fuels. Some of these odors may reach sensitive receptors adjacent to the project site, but impacts would be temporary in nature. The odors would be limited to the time that construction equipment is operating and all off-road construction equipment is required to limit engine idling to five minutes under the CARB anti-idling rule (SS2449(d)(2)). As odors from construction would be temporary and limited by CARB regulations, no significant impact would occur and further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

4 Biological Resources

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

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

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

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

d. *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

e. *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

f. *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The proposed project would involve the demolition of an existing gymnasium and construction of a replacement gymnasium on an operating high school campus. The project site is not within the area of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (CDFW 2015, USFWS 2016). The project site is almost entirely covered in impervious surface with minor ornamental landscaping, including grasses, and shrubs, bordering the existing gymnasium walls. There are no trees on the project site. The site does not include any riparian or sensitive natural communities, wetlands, or wildlife corridors. Therefore, the project would not impact any special status species or conflict with local policies, such as a tree preservation policy. No biological impacts would occur.

NO IMPACT

5 Cultural Resources

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project have any of the following impacts?				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5	■	☐	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5	■	☐	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	■	☐	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries	■	☐	☐	☐

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

The Jay Willard Gymnasium was originally constructed in 1948 and opened in 1949. It was originally designed by the architecture firm Masten and Hurd in the Late Moderne style with elements of the International Style, typical of the firm's post-World War II educational projects. A Preliminary Historic Assessment and Code Analysis conducted by Page & Turnbull (2016) concluded that the existing gymnasium does not appear to be individually eligible for the National Register of Historical Places, California Register of Historical Resources, or Eureka Register of Local Places due to alterations to its original design. However, the gymnasium is considered potentially historic by a local heritage society. The proposed project would demolish the existing gymnasium, which requires structural, accessibility, and other types of improvements. Due to the potential historical status of the existing gymnasium, further analysis will be conducted in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?

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

d. Would the project disturb any human remains, including those interred outside of formal cemeteries?

The project site is on the campus of an existing high school in an urban setting. The proposed project would involve minor excavation for construction of the replacement gymnasium in an area that has been previously disturbed and developed for school uses. The project would not disturb native soils and is not expected to include substantial excavation. Nevertheless, there is a potential that existing human remains, cultural, archaeological, and paleontological resources are present under the existing lots, and that project construction activities, including demolition, could have adverse impacts on existing

identified and previously unidentified paleontological and archaeological resources, or disturb any unidentified human remains. Impacts to cultural resources could be potentially significant, and will be further discussed in the EIR.

POTENTIALLY SIGNIFICANT IMPACT

6 Geology and Soils

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project have any of the following impacts?				
a. Expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault	☐	☐	■	☐
2. Strong seismic ground shaking	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction	☐	☐	■	☐
4. Landslides	☐	☐	☐	■
b. Result in substantial soil erosion or the loss of topsoil	☐	☐	■	☐
c. Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse	☐	☐	☐	■
d. Be located on expansive soil, as defined in Table 1-B of the *Uniform Building Code*, creating substantial risks to life or property	☐	☐	☐	■
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater	☐	☐	☐	■

a.1. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*

Humboldt County lies in an area of high seismic risk (Humboldt County 2012). Three crustal plates—the Pacific Plate, Gorda Plate, and North American Plate—intersect offshore to form the Mendocino Triple

Junction. Consequently, the area is seismically active and offshore Cape Mendocino has the highest concentration of earthquake events in the continental United States. The project site, however, does not lie in a fault rupture zone, as delineated by the Alquist-Priolo Earthquake Fault Zoning Map (California Department of Conservation [DOC] 2016). Therefore, impacts due to rupture of a known earthquake fault would be less than significant and do not warrant further analysis in an EIR.

LESS THAN SIGNIFICANT IMPACT

a.2. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

Humboldt County contains four major fault zones: San Andreas Fault, Falor-Korbel (Mad River) Fault, Trinidad and Big Lagoon Faults, and Cascadia Subduction Zone (Humboldt County 2012). Activity along any of these fault systems could result in strong ground shaking and all of Eureka lies in an area of relatively high earthquake shaking potential (CGS and USGS 2008). However, the proposed project does not lie in an area of significant seismic hazards (CA DOC 1980) and would be constructed in accordance with California Building Code (CBC) standards. In addition, there are a number of state regulations that apply to schools that would prevent and/ or mitigate seismic hazards, including the Field Act and California Education Code, Section 17212.5, which apply to the proposed project. The Field Act established the Division of the State Architect to develop design standards and quality control procedures for school earthquake-resistant construction, and requires that schools be designed by registered architects and engineers. California Education Code, Section 17212.5 requires preparation of geological and soil engineering studies for the construction of any school building, or for the reconstruction, alteration, or addition to any school building that alters structural elements, if the estimated cost exceeds $20,000. Compliance with applicable standards and regulations would reduce seismic ground shaking impacts to a less than significant level. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.3. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*

Liquefaction is a process whereby soil is temporarily transformed to fluid form during intense and prolonged ground shaking or because of a sudden shock or strain. Liquefaction typically occurs in areas where the groundwater is less than 30 feet from the surface and where the soils are composed of poorly consolidated fine to medium sand. The project site is not located in an area with liquefaction hazard potential as mapped in the Eureka Geology for Planning Map (CA DOC 1980). There would be no impact and further analysis in an EIR is not warranted.

NO IMPACT

a.4. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

The project site is located in a flat, developed area without any nearby slopes and has not been mapped as an area at risk for seismically induced landslides (DOC 1980). As there is no risk of landslides on the site, no impact would occur and further analysis in an EIR is not warranted.

NO IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

The project involves demolition of an existing gymnasium and construction of a new gymnasium. Construction of the new gymnasium would involve removal of the existing pavement and shallow excavation, along with grading activities. The project site is located in a flat, urbanized area not subject to

erosion. In addition, construction activities would be subject to the National Pollution Discharge Elimination System (NPDES) Construction General Permit (2009-0009-DWQ), most recently adopted by the California State Water Board on September 2, 2009. This permit became effective on July 1, 2010 and applies to construction sites one acre or larger in size. All developments for which the Construction General Permit applies are required to prepare and implement a storm water pollution prevention plan (SWPPP). SWPPPs specify best management practices (BMP) to be implemented by the contractor during construction to minimize soil erosion, storm water runoff, and downstream impacts to water quality. With adherence to the BMPs required by a SWPPP, erosion impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. *Would the project be located on a geologic unit or soil that is unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

The project site is not located in an area vulnerable to liquefaction, collapse, landsliding, lateral spreading, lurch cracking or fault rupture as mapped in the Geology for Planning Eureka Quadrangle (DOC 1980), nor located in an area of land subsidence (USGS 2016a).Thus, the proposed project would not result in on or offsite impacts to geological instability and further analysis in an EIR is not warranted.

NO IMPACT

d. *Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property?*

The project site is located on an operating high school campus and has previously been paved and utilized for school activities. No issues with expansive soils are known to be present. There would be no impact.

NO IMPACT

e. *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

Eureka High School is served by an existing sewer system. The proposed project would not involve the use of septic tanks or any other alternative waste water disposal systems. No impact would occur.

NO IMPACT

7 Greenhouse Gas Emissions

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project have any of the following impacts?				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment	☐	☐	■	☐
b. Conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of greenhouse gases	☐	☐	■	☐

Climate change is the observed increase in the average temperature of the earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. Climate change is the result of numerous, cumulative sources of greenhouse gases (GHG), which contribute to the "greenhouse effect," a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the sun hits the earth's surface and warms it. The surface in turn radiates heat, known as infrared radiation, back toward the atmosphere. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping into space and re-radiate it in all directions. This process is essential to support life on Earth because it warms the planet by approximately 60° Fahrenheit. Emissions from human activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat and contribute to an average increase in Earth's temperature.

GHGs occur naturally and from human activities. Human activities that produce GHGs include fossil fuel burning (coal, oil, and natural gas for heating and electricity, gasoline and diesel for transportation); methane generated by landfill wastes and raising livestock; deforestation activities; and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). Since 1750, estimated concentrations of CO_2, CH_4, and N_2O in the atmosphere have increased over by 36 percent, 148 percent, and 18 percent respectively, primarily due to human activity. Emissions of GHGs affect the atmosphere directly by changing its chemical composition. Changes to the land surface indirectly affect the atmosphere by changing the way in the Earth absorbs gases from the atmosphere. Potential impacts in California of global warming may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (California Energy Commission [CEC] 2009).

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15% reduction below 2005 emission levels; the same requirement as under S-3-05), and requires ARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the

California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing ARB to develop regional GHG emission reduction targets to be achieved from vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, ARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

In September 2016, Governor Brown signed SB 32, which requires California to reduce GHG emissions by 40 percent below 1990 levels by the year 2030 (Office of Governor 2016). State guidance for meeting the SB 32 mandated reduction will be provided by the California Air Resource Board (ARB) in its next Scoping Plan, which is anticipated to be finalized in 2017.

The adopted CEQA Guidelines provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. The NCUAQMD has not set any thresholds with which to assess the significance of GHG emissions under CEQA (NCUAQMD 2016b). In the absence of any regional guidance, for the purpose of this analysis, the proposed project is considered to have significant impacts on greenhouse gas emissions if it would conflict with AB 32, an approach adopted by a number of AQMDs to guide the determination of significance thresholds. The Bay Area Air Quality Management District (BAAQMD) has adopted this approach and set a significance threshold for projects other than stationary sources of: 1,100 metric tons of CO_2 equivalent (MT CO_2e) units per year, or 4.6 MT CO_2e per service population per year, or consistency with a Climate Action Plan (BAAQMD 2009). The "bright line thresholds" set by the BAAQMD are expected to cause 52 percent of all new land use development projects that account for 92 percent of all Bay Area emissions to require mitigation measures, which would close the gap between 2020 emission levels mandated by AB 32 and BAAQMD forecast emissions under a scenario where only Scoping Plan strategies are implemented.

The significance threshold of 1,100 MT CO_2e per year is adopted for the following analysis although the proposed project is not within the BAAQMD and the BAAQMD threshold has not yet been updated to reflect SB 32 requirements. Because the BAAQMD has experienced a much higher population growth and increase in vehicle use since 1990 than the North Coast, and therefore has a bigger gap to close, the bright line threshold adopted by BAAQMD represents a conservative threshold for a new land use development project occurring in the North Coast. In addition, as explained in greater detail below, the proposed project would not contribute any net new GHG emissions—rather, the only GHG emissions would result only from one-time project construction activities. Therefore, the proposed project would not conflict with the goals of SB 32.

Emissions associated with the proposed project were estimated using the CalEEMod version 2016.3.1 as previously described in Section 3, *Air Quality*. Complete CalEEMod results and assumptions can be viewed in Appendix A.

a. *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

b. *Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

The proposed project's energy use, daily operational activities, and associated vehicle trips would generate GHG emissions. However, the proposed project would not result in a net increase in

operational GHG emissions compared to existing conditions as the proposed replacement gymnasium would not introduce new uses or increase the student population relative to the existing gymnasium, and, in fact, would likely emit fewer GHG emissions as the proposed structure would be more energy and water-efficient than the existing gymnasium, originally constructed in 1948. Consequently, operational GHG emissions would be less than significant.

Project construction activities would generate net new GHG emissions compared to existing conditions, primarily from the burning of fossil fuels associate with construction equipment and construction vehicle trips. CalEEMod 2016.3.1 was used to calculate emissions resulting from construction activities associated with the proposed project. Construction of the proposed project would generate a total of approximately 248 MT CO_2e in a single year. Because construction-related construction emissions are confined to a relatively short period of time in relation to the overall life of the proposed project, the construction-related GHG emissions have been amortized over a 30-year period. Thus, the approximate annual GHG contribution of the proposed project would be approximately 8.3 MT of CO_2e per year, which is far below the BAAQMD significance threshold of 1,100 MT CO_2e per year.

As construction emissions would be minimal and operational GHG emissions would be at or below existing levels, the proposed project's GHG emissions would have a less than significant impact on the environment. The proposed project would not impede attainment of AB 32 or SB 32 reduction goals. Impacts from GHG emissions would be less than significant and further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

8 Hazards and Hazardous Materials

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project have any of the following impacts?				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school	☐	☐	■	☐
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area	☐	☐	☐	■
f. For a project near a private airstrip, would it result in a safety hazard for people residing or working in the project area	☐	☐	☐	■
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	☐	☐	☐	■
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands	☐	☐	■	☐

a. *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

The proposed gymnasium would not create a significant hazard to the public or the environment as it would not involve routine transport, use, or disposal of hazardous materials. Materials used by the proposed project would be similar to those found in common household projects such as surface and floor cleaning products utilized for routine janitorial cleaning procedures. These materials would not be accessible to the students attending the school and would not be utilized in large quantities that would cause a significant environmental or health risk to the public. Also, any use of potentially hazardous materials utilized during construction of the proposed project would comply with all local, state, and federal regulations regarding the handling of potentially hazardous materials. Therefore, impacts would be less than significant and further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

Land uses such as schools, typically do not use or store large quantities of hazardous materials. Consequently, operation of the project would not create a significant hazard to the public or the environment and would not emit hazardous emissions. However, due to the age of the existing gymnasium (over 60 years old), there is the potential for asbestos and lead to be released during demolition. As previously discussed in Section 3, Air Quality, lead-based materials and asbestos exposure is regulated by Cal OSHA. CCR §1532.1 regulates lead emissions and exposure and CCR §1529 regulates asbestos emissions and exposure. The NCUAQMD also enforces Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) that regulate asbestos during the renovation and demolition of buildings (NCUAQMD 2016c). Furthermore, demolition would be conducted when school is not in session, as required by mitigation measure N-2 (see Section 12, Noise), which would further reduce the risk that students and staff would be exposed to harmful levels of lead or asbestos.

Potentially hazardous materials such as fuels, lubricants, and solvents could also be used during construction of the project. However, the transport, use, and storage of hazardous materials during the construction of the project would be conducted in accordance with all applicable State and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. Adherence to existing requirements for hazardous materials would reduce impacts to a less than significant level and further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d. *Would the project be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

The following databases compiled pursuant to Government Code Section 65962.5 were checked (November 7, 2016) for known hazardous materials contamination within 1,000 feet of the project site:

- *U.S. EPA*
    - *Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Search*

- *California State Water Resources Control Board*
    - *Geotracker search for leaking underground storage tanks (LUST) and other Cleanup Sites*
- *California Department of Toxic Substances Control*
    - *Cortese list of Hazardous Waste and Substances Sites*
    - *Envirostor: Cleanup Site and Hazardous Waste Facilities Database*

No hazardous material sites within 1,000 feet of the project site were identified in CERCLIS, Envirostor, or the Cortese list. A search using Geotracker identified one LUST site located within 1,000 feet east of the project site at 2233 N Street. The site was cleaned up and case closed as of April 2004, indicating the site is no longer a hazard to the public or the environment. Given the status of the case and the fact that there are no other relevant listings for potential contamination, no impact would occur. Further analysis in an EIR is not warranted.

NO IMPACT

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

f. For a project near a private airstrip, would it result in a safety hazard for people residing or working in the project area?

The project site is located approximately 2.5 miles southwest of the Murray Field-Eka airport, 2.8 miles northeast of the Samoa Field Airport, and about 13 miles southwest of the Arcata-Eureka Airport in McKinleyville. No other airports or private air strips are located in the project vicinity. The proposed project would not be located within an airport influence area (Humboldt County 2007) and would not conflict with adopted or planned airport land use plans. Consequently, it would not result in a safety hazard for students or employees. Therefore, no impact would occur and further analysis in an EIR is not warranted.

NO IMPACT

g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The proposed project would not directly impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, or involve the development of structures that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation. The proposed gymnasium would replace an existing gymnasium on an existing high school campus and would not alter, procedures, or communications to be utilized or implemented during an emergency, or generate additional population or traffic that could slow emergency response. The proposed reconfiguration of the bus lane would not impede access to the fire lane north of the project site. Therefore, existing access routes for emergency vehicles would not be affected. In addition, the proposed project would comply with the CBC standards, including Fire Code requirements. Therefore, impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

NO IMPACT

h. Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The project site is located in an urbanized area in Eureka, surrounded primarily by paved surfaces and structures. The city of Eureka is surrounded by open space that begins, at its nearest point, approximately a mile to the south and east of the project site. The project site is not located in a Fire Hazard Severity Zone (CAL Fire 2007), indicating that the area is at low risk from fire and the County has no Very High Fire Hazard Severity Zones.

Eureka is a Local Responsibility Area (LRA), so fire protection is provided locally rather than by CAL FIRE. Humboldt Bay Fire (HBF) provides fire protection services to the City of Eureka and the Greater Eureka area (HBF 2016). The project site is located approximately 1.3 miles by car from HBF Station 1 (533 C Street), approximately 1.8 miles from HBF Station 3 (2905 Ocean Avenue, approximately 2.2 miles from HBF Station 5 (3455 Harris Street), and approximately 3.2 miles from HBF Station 2 (Herrick Avenue). As the project site lies in an area at low risk for fire and in proximity to local fire protection resources, impacts would be less than significant. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

9 Hydrology and Water Quality

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project have any of the following impacts?				
a. Violate any water quality standards or waste discharge requirements	☐	☐	■	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	■
d. Substantially alter the existing drainage pattern of the site or area, including the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or offsite	☐	☐	☐	■
e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	☐	☐	■	☐
f. Otherwise substantially degrade water quality	☐	☐	■	☐
g. Place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map	☐	☐	■	☐
h. Place structures in a 100-year flood hazard area that would impede or redirect flood flows	☐	☐	■	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including that occurring as a result of the failure of a levee or dam	☐	☐	■	☐
j. Result in inundation by seiche, tsunami, or mudflow	☐	☐	■	☐

a. *Would the project violate any water quality standards or waste discharge requirements?*

e. *Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

f. *Would the project otherwise substantially degrade water quality?*

The City of Eureka manages the stormwater drainage system within its jurisdictional boundary. The proposed replacement gymnasium would utilize the existing storm drainage system at the project site. Because the proposed project would connect to City storm drain systems, the connection is subject to the requirements of the City. The City of Eureka has been issued a National Pollutant Discharge Elimination System (NPDES) Phase II Small Municipal Storm Sewer System (MS4) Permit, which requires long-term, post-construction BMPs to be incorporated into new development and significant redevelopment projects, such as the inclusion of permeable surfaces on site to allow natural drainage. In addition, the proposed project would be subject to the NPDES General Construction Permit, as previously described in Section 6, Geology and Soils, which requires all project sites greater than an acre in size to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would identify best management practices to minimize stormwater runoff and prevent sediment and other pollutants from entering storm drains during construction.

The proposed project involves demolition of an existing gymnasium and construction of a replacement gymnasium on an existing paved lot. The new gymnasium would be used for physical education courses and sporting events in the same manner as the existing gymnasium, and almost 100 percent of the project site currently is, and would continue to be, impervious surfaces. Consequently, the proposed project would not result in a net change in waste water generation or runoff, or otherwise contribute to a net change in water quality.

As the proposed project would not generate additional wastewater or runoff and would be required to comply with the City's MS4 and General Construction permit requirements to reduce runoff and stormwater contamination, impacts to water quality and storm drain system capacity would be less than significant and further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

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

The City's potable water is purchased from the Humboldt Bay Municipal Water District (the District) and consists almost entirely of groundwater drawn from wells below the bed of the Mad River. The District

currently has water rights to divert 75 million gallons per day (mgd) from the Mad River, or 84,000 acre feet per year (AFY) and the City of Eureka maintains water rights to Mad River water equivalent to 5.8 mgd (6,499 AFY) (Humboldt County 2007). Projected water demand for Eureka through 2030 never exceeds 3,470 AFY, leaving a surplus of at least 3,000 AFY (Eureka 2010).

The proposed project would not affect the existing hydrologic condition, nor result in additional demand on water resources. The proposed project would not alter the net spatial amount of impervious surface area at the subject site as the area is paved and otherwise developed with structures. Therefore, groundwater recharge would not be affected. Overall, impacts on local groundwater would be less than significant and further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. Would the project substantially alter the existing drainage pattern of the site or area, including by altering the course of a stream or river, in a manner that would result in substantial erosion or siltation on or offsite?

d. Would the project substantially alter the existing drainage pattern to the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or offsite?

The project site is almost entirely covered with impervious surfaces. Implementation of the proposed project would not alter this condition. Potential exposure of underlying surfaces during construction activities would not substantially alter the existing drainage pattern of the site or area as contractors would be required to implement BMPs identified in the project's SWPPP to prevent substantial erosion and runoff onsite. Furthermore, the project site is not located in proximity to a stream or river and the project drainage would flow into the existing storm drain system. Consequently, the proposed project would not alter the site in a manner that would lead to erosion or siltation on or offsite, nor would it result in flooding. No further analysis in an EIR is warranted.

NO IMPACT

g. Would the project place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map?

h. Would the project place in a 100-year flood hazard area structures that would impede or redirect flood flows?

i. Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding including that occurs as a result of the failure of a levee or dam?

j. Would the project result in inundation by seiche, tsunami, or mudflow?

According to the Federal Emergency Management Agency (FEMA), the project site is located outside of the 1 percent and 0.2 percent annual chance flood hazard zone (FIRM panel 06023C0830F; FEMA 2016). Therefore, it would not place housing or other structures in a flood hazard area. There is no documented risk of flooding at the project site due to levee or dam failure. In addition, the project site lies outside of Eureka's tsunami inundation zone, as depicted in the Eureka Quadrangle of the "Tsunami Indundation Map for Emergency Planning" (EMA 2009) and would not be vulnerable to seiches, which cause vertical movement of waves, as opposed to horizontal movement and thus impact near shore areas. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

10 Land Use and Planning

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project have any of the following impacts?				
a. Physically divide an established community	☐	☐	☐	■
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	☐	☐	☐	■
c. Conflict with an applicable habitat conservation plan or natural community conservation plan	☐	☐	☐	■

a. *Would the project physically divide an established community?*

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

The project site is located at an existing high school campus in an urbanized area of Eureka. The proposed project would replace an existing gymnasium with a new gymnasium, as well as reconfigure a bus lane and parking areas on a high school campus. It would not introduce a new use that would divide an established community or conflict with any applicable Eureka City School District, or state plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. There would be no impact to an established community or inconsistency with applicable land use regulations.

NO IMPACT

c. *Would the project conflict with an applicable habitat conservation plan or natural community conservation plan?*

The project site is not located within an area subject to a habitat conservation plan or natural community conservation plan (USFWS 2016; CDFW 2015). There would be no conflict with a conservation plan and no impact would occur.

NO IMPACT

11 Mineral Resources

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project have any of the following impacts:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

a. *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

b. *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

The project site is already developed as a high school campus with no mineral resource extraction activities occurring onsite or in adjacent areas and no mineral resources identified onsite (USGS 2016b). Thus the project would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site.

NO IMPACT

12 Noise

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in any of the following impacts?				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies	☐	☐	■	☐
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels	☐	☐	■	☐
c. A substantial permanent increase in ambient noise levels above those existing prior to implementation of the project	☐	☐	■	☐
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above those existing prior to implementation of the project	☐	■	☐	☐
e. For a project located in 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	☐	☐	☐	■
f. For a project near a private airstrip, would it expose people residing or working in the project area to excessive noise	☐	☐	☐	■

Noise is defined as unwanted sound that disturbs human activity. Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Noise level measurements include intensity, frequency, and duration, as well as time of occurrence. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). Equivalent noise level (L_{eq}) is the preferred method to describe sound levels that vary over time and provides an average noise value over a specified amount of time.

Sound from a single source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level from point sources attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. Roadway traffic is characterized by many, continuous sources of noise. Noise from roadway traffic attenuates at a rate of 3 dBA per doubling of distance. A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object,

proximity to the noise source and receiver, surface weight, solidity, and the frequency content of the noise source. A single row of buildings typically attenuates sound by 10 dBA.

Some land uses are considered more sensitive to ambient noise levels than other uses due to the amount of noise exposure and the types of activities involved. Residences, motels, hotels, schools, libraries, churches, nursing homes, auditoriums, parks and outdoor recreation areas are more sensitive to noise than are commercial and industrial land uses.

The City of Eureka establishes noise level performance standards for new projects in the Health and Safety Element of the General Plan, Table 7-1. The maximum allowable daytime (7 a.m. to 10 p.m.) noise level as measured within the property line of lands designated for noise-sensitive uses is a maximum of 70 dBA or 50 dBA hourly L_{eq}. The maximum allowable nighttime (10 p.m. to 7 a.m.) noise level is a maximum of 65 dBA or 45 dBA hourly L_{eq}. These standards are intended to apply to project operational noise levels and not temporary noise levels due to new project construction. The General Plan also establishes noise standards for transportation noise sources and noise compatibility thresholds for land uses with respect to transportation noise. However, these standards are not applicable to the proposed project as it would not build school capacity or result in new uses relative to the existing gymnasium that would generate new trips and increase transportation noise.

a. *Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

c. *Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

The proposed project would serve the existing student population and would provide the same uses that occupy the project site (i.e., gymnasium, bus lane, parking areas). Consequently, the proposed project would not result in a net change in noise at the project site and operational noise would not expose nearby sensitive uses to noise levels in exceedance of applicable standards or result in a substantial permanent increase in ambient noise levels. Activities associated with the proposed gymnasium would occur indoors and the new gymnasium would be constructed in accordance with CBC construction standards. Replacement of the existing gymnasium would likely reduce ambient noise levels as noise standards for new buildings have become more stringent over time and the existing gymnasium was first constructed over sixty years ago in 1948. Thus, the proposed new gymnasium may result in lower exterior ambient noise levels associated with events inside the gymnasium compared to the existing gymnasium. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d. *Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

Construction of the proposed project would generate temporary noises that would potentially impact sensitive receptors near the project site. Typical noise levels from individual pieces of construction equipment range from about 70 dBA to 90 dBA at a distance of 50 feet (Table 4). Noises associated with demolition of the existing gymnasium would impact nearby sensitive receptors. The existing gymnasium site has school buildings as close as 40 feet to the north and residences as close as 90 feet to the southwest. Noise levels associated with construction of the replacement gymnasium would also impact nearby sensitive receptors. The proposed site of the replacement gymnasium has school buildings as close as 92 feet to the north and residences as close as 150 feet to the south (see Figure 3) from the project site boundary. In addition, reconfiguration of the bus lane would occur in areas along the project site's northern border directly adjacent to classrooms. However, construction activities associated with

this component of the project would be smaller in magnitude relative to other components as no demolition or construction of structures would be involved. For the purpose of this analysis, noise impacts from construction activities associated with demolition of the existing gymnasium and construction of the replacement gymnasium and new parking areas are evaluated separately from noise impacts from construction activities associated with reconfiguration of the bus lane.

Table 4 Typical Noise Levels Generated by Construction Equipment

Equipment	Typical Lmax (dBA) 50 feet from the Source
Air Compressor	78
Backhoe	78
Concrete Saw	90
Concrete Mixer	79
Generator	81
Paver	77
Roller	80
Welder/Torch	74

Source: FHWA 2015

Demolition and Construction of Gymnasium and Parking Areas

Construction noise levels were modeled by phase to determine the proposed project's impacts on ambient noise levels due to construction activities. Table 5 shows the hourly Leq for different phases of construction at the nearest school and residential sensitive receptors. The type of construction equipment used and hours of use for each phase were assigned based on CalEEMod 2016.3.1 defaults. Noise levels and percentage of acoustical usage for different construction equipment were taken from the Federal Highway Administration's (FHWA) *Construction Noise Handbook,* Table 9.1. It was assumed construction activities would occur on average 50 feet from the project site boundary as construction activities would occur throughout the site. With this assumption incorporated, demolition activities would occur at a distance of 90 feet and 140 feet from the nearest school and residential receptors, respectively, and construction activities would occur at a distance of 142 feet and 190 feet from the nearest school and residential receptors, respectively. Appendix B provides calculations and results for construction noise modeling.

Demolition and construction activities would result in a temporary increase in ambient noise levels for sensitive receptors. As shown in Table 5, the proposed project would result in noise levels above the maximum thresholds for noise-sensitive uses of 50 dBA hourly L_{eq} in all phases of construction and would exceed the 70 maximum dBA in all phases, except for architectural coating. While City exterior noise standards do not apply to construction activities and are not intended to be used as significance thresholds, they are indicative of typical ambient noise levels for surrounding uses. Therefore, the fact that construction activities would cause exterior noise levels to exceed standards for surrounding uses indicates that the proposed project would result in a substantial temporary increase in ambient noise levels in the project vicinity. There are no restrictions on construction activities in the City's General Plan

or Municipal Code. Mitigation measures provided below would be incorporated to reduce construction noise impacts to a less than significant level.

Table 5 Construction Noise Levels at Sensitive Receptors

Phase	Nearest School Receptor Combined Hourly Noise (dBA Leq)	Nearest Residential Receptor Combined Hourly Noise (dBA Leq)
Demolition[1]	80	76
Site Preparation and Grading	74	71
Building Construction	72	69
Architectural Coating	64	61
Paving	76	73

Source: FHWA 2015

1. Demolition activities would occur only in the area of the existing gymnasium. All other phases of construction would occur one block to the west of the existing gymnasium.

Mitigation Measures

The following mitigation measures are required to reduce construction noise impacts to a less than significant level.

N-1 Eureka City Schools shall require construction contractors to limit standard construction activities to between 7:00 a.m. and 7:00 p.m. Monday through Friday. No construction activities shall be allowed on weekends, except that interior construction shall be permitted after buildings are enclosed. No extreme noise-generating activities shall be allowed on weekends and holidays. This would limit impacts on sensitive receptors to daytime hours.

N-2 Eureka City Schools shall require construction contractors to either: 1) conduct demolition activities, which involve the greatest noise impacts, on days when school is not in session, or 2) conduct demolition activities shall during the summer when fewer students are enrolled and no bus service is provided and prohibit school activities within 150 feet of the demolition site boundary. This would limit noise impacts on school uses. If feasible, it is recommended that other construction activities occur outside of school hours or during the summer as well.

N-3 To reduce daytime noise impacts due to construction, Eureka City Schools shall require construction contractors to implement the following measures:

1. Equipment and trucks used for project construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds), wherever feasible.
2. Impact tools (e.g., jack hammers, pavement breakers, and rock drills) shall be hydraulically or electrically powered rather than pneumatically powered wherever possible. Where use of pneumatic tools is unavoidable, an exhaust muffler shall be applied to the pneumatic tool; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter tools and procedures shall be used whenever feasible.
3. Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, insulation barriers, or other noise control measures to the extent feasible.

4. Where feasible, temporary barriers shall be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. Acoustical barriers shall be constructed of material having a minimum surface weight of 2 pounds per square foot or greater, and a demonstrated STC rating of 25 or greater as defined by American Society for Testing and Materials (ASTM) Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be specified by a qualified acoustical consultant.

Use of a sound barrier with an STC rating of 25 or greater typically reduces construction noise levels by 8 to 10 dBA, and can feasibly reduce noise levels up to15 dBA, and even higher. Use of manufacturer-certified mufflers associated with construction equipment would reduce noise levels generally by 5 dBA, but has the potential to reduce noise levels by up to 8 dBA (West Hollywood 2014). Together, these two measures would reduce sound levels during construction by approximately 16-23 dBA. Table 6 shows the mitigated construction noise levels by construction phase at the nearest sensitive receptors.

Table 6 Mitigated Construction Noise Levels at Nearest Sensitive Receptor

	Mitigated Combined Hourly Noise (dBA Leq)	
Phase	**Nearest School Receptor**	**Nearest Residential Receptor**
Demolition[1]	NA or 53-60[2]	53-60
Site Preparation and Grading	51-58	48-55
Building Construction	49-56	46-53
Architectural Coating	41-48	38-45
Paving	53-60	50-57

Source: FHWA 2015

1. Demolition activities would occur only in the area of the existing gymnasium. All other phases of construction would occur one block to the west of the existing gymnasium.

2. Demolition activities would have no noise impact on school receptors if it would occur when school is not in session (mitigation measure N-2, option 1) or would result in exterior noise levels of 76 dBA at a distance of 150 feet (mitigation measure N-2, option 2), which would be mitigated to 53-60 dBA. See Appendix B for modeling worksheet.

With mitigation, exterior noise levels during construction at sensitive receptors would be reduced to sound levels of 60 dBA Leq or lower. 60 dBA is comparable to the sound of conversation in a restaurant, a busy office, background music, or an air conditioner unit at 100 feet (IAC Acoustics 2017). In addition, construction would be limited to daytime hours when noise-sensitive activities (e.g., sleeping) generally do not occur. School activities occur primarily indoors where walls and insulation would attenuate exterior construction noises to lower levels. Therefore, construction of the proposed project would result in an adverse, but less than significant noise impact with incorporation of mitigation.

Bus Lane Reconfiguration

Repaving and construction of new curbs and walkways associated with reconfiguration of the existing bus lane would occur directly adjacent to existing classrooms along the northern border of the project site. However, the scope of these construction activities would be of shorter duration and more limited in scope and can be mitigated through a timing restriction or distance restriction similar to mitigation measure N-2. Mitigation measure N-4 below, as well as other applicable noise mitigation measures (i.e.,

N-1 and N-3), would be incorporated to reduce noise impacts from bus lane reconfiguration construction activities to a less than significant level.

Mitigation Measure

The following mitigation measure is required to reduce construction noise impacts associated with bus lane reconfiguration to a less than significant level.

N-4 Eureka City Schools shall require construction contractors to either: 1) reconfigure the bus lane during a period of time when school is not in session, such as at the end of summer, or 2) conduct construction activities during the summer and prohibit school activities within 150 feet of the construction site boundary.

With mitigation incorporated, exterior noise levels associated with bus reconfiguration would be no greater than 60 dBA Leq at a distance of 150 feet. At this minimum distance, exterior noise levels during demolition phase for the proposed project would be 76 dBA Leq (calculations provided in Appendix B), which would be mitigated to 53-60 dBA Leq. As construction activities associated with bus reconfiguration would generate lower levels of noise than demolition, this is a conservative approach for determining a minimum distance. Incorporation of mitigation would reduce construction noise impacts on school uses to a less than significant level.

POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED

b. Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Vibration is a unique form of noise because its energy carries through buildings, structures, and the ground, whereas noise carries through the air. Therefore, vibration is generally felt rather than heard. Some vibration effects can be caused by noise; e.g., the rattling of windows from passing trucks. This phenomenon is caused by the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, groundborne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB) in the U.S.

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel wheeled trains, and traffic on rough roads.

Vibration impacts would be significant if they exceed the following Federal Railroad Administration (FRA) thresholds:

- 65 VdB where low ambient vibration is essential for interior operations, such as hospitals and recording studios
- 72 VdB for residences and buildings where people normally sleep, including hotels
- 75 VdB for institutional land uses with primary daytime use, such as churches and schools
- 95 VdB for physical damage to extremely fragile historic buildings
- 100 VdB for physical damage to buildings

Therefore, construction-related vibration impacts would be less than significant if they are below the threshold of physical damage to buildings (100 VdB), would not interfere with sleep at adjacent

residences, and would be below the threshold for institutional land uses (75 dBA) at adjacent school uses during school hours. Table 7 shows vibration levels for construction equipment of concern.

Table 7 Typical Vibration Levels for Construction Equipment

	Approximate VdB				
Equipment	**30 Feet**	**50 Feet**	**100 Feet**	**200 Feet**	**300 Feet**
Large Bulldozer	85	78	69	60	55
Loaded Trucks	83	77	68	59	54
Jackhammer	76	70	61	52	47
Small Bulldozer	55	48	40	31	26

Source: Federal Transit Administration 2006.

Table 8 shows construction vibration levels at the nearest school and residential receptor for demolition activities, which would occur at the site of the existing gymnasium, and construction activities, which would occur one block to the west at the site of the proposed replacement gymnasium. Distances used to model vibration impacts were the same as those used to model noise impacts. Vibration impacts were modeled for a large bulldozer and loaded truck, which would be the only two pieces of construction equipment associated with construction of the proposed project that could produce potentially significant vibration impacts; the list of construction equipment to be used for project construction was compiled based on CalEEMod defaults as construction details have not yet been determined by the project applicant at this time. Appendix B provides model inputs and results. Vibration impacts during construction of the replacement gymnasium would be at or below FRA thresholds for residential and institutional uses, including schools. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

Table 8 Construction Vibration Levels at Sensitive Receptors

Phase	Equipment	Maximum vibration at nearest school receptor (VdB)	Maximum vibration at nearest residential receptor (VdB)
Demolition[1]	Large bulldozer	70	65
	Loaded truck	69	63
Construction	Large bulldozer	64	60
	Loaded truck	63	58

1. Demolition activities would occur only in the area of the existing gymnasium. All other phases of construction would occur one block to the west of the existing gymnasium.

e. For a project located in 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?

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

The project site is located approximately 2.5 miles southwest of the Murray Field-Eka Airport, 2.8 miles northeast of the Samoa Field Airport, and about 13 miles southwest of the Arcata-Eureka Airport in McKinleyville. The project site is not located within an influence area for any of these airports (Humboldt

County 2007). No other airports or private airstrips are located in the project vicinity. Therefore, students, school employees, and school visitors would not be exposed excessive noise levels from an airport or private air strip. No impact would occur and further analysis in an EIR is not warranted.

NO IMPACT

13 Population and Housing

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in any of the following impacts?				
a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)	☐	☐	☐	■
b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere	☐	☐	☐	■
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere	☐	☐	☐	■

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

The proposed project would involve the replacement of an existing gymnasium and reconfiguration of a bus lane and parking areas on a high school campus. The proposed project would be serviced by existing infrastructure. It would not increase school capacity or develop new infrastructure that would indirectly induce population growth. Therefore, no impact to population or housing stock would be anticipated.

NO IMPACT

b. *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

c. *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

The proposed project would replace an existing gymnasium and reconfigure a bus lane and parking areas on a high school campus. No residential dwelling units would be affected or residents displaced and there would be no impact to existing housing or any impact that would cause residents to be displaced.

NO IMPACT

14 Public Services

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in any of the following impacts?				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1. Fire protection	☐	☐	☐	■
2. Police protection	☐	☐	☐	■
3. Schools	☐	☐	☐	■
4. Parks	☐	☐	☐	■
5. Other public facilities	☐	☐	☐	■

a.1. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?*

Fire protection in Eureka is provided by Humboldt Bay Fire (HBF) (HBF 2016). The project site is located approximately 1.3 miles by car from HBF Station 1 (533 C street), approximately 1.8 miles from HBF Station 3 (2905 Ocean Avenue, approximately 2.2 miles from HBF Station 5 (3455 Harris Street), and approximately 3.2 miles from HBF Station 2 (Herrick Avenue). The proposed project would comply with all Fire Prevention Bureau provisions required by HBF and is located within an area that is already served by the HBF. It would not increase school capacity or provide residences that would increase HBF's service population. Therefore, it would not result in substantial adverse impacts or the need for additional facilities. There would be no impact to the provision of these public services and no further analysis in an EIR is warranted.

NO IMPACT

a.2. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts,*

in order to maintain acceptable service ratios, response times or other performance objectives for police protection?

Police protection services in Eureka are provided by the Eureka Police Department (EPD), which has a station at 604 C Street, about 1.2 miles away by car from the project site. The proposed project would not increase school capacity or provide residences that would increase the EPD's service population. Therefore, it would not result in substantial adverse impacts to existing police facilities or impact the need for additional facilities or staff. There would be no impact on police services and no further analysis in an EIR is warranted.

NO IMPACT

a.3. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools?*

The proposed project would replace an existing gymnasium and reconfigure a bus lane and parking areas on the Eureka High School campus. It would not increase school capacity or induce population growth. Therefore, it would not result in a need for new or physically altered governmental facilities to meet school service and performance objectives. There would be no construction or alteration of new governmental facilities and no resulting impacts and no further analysis in an EIR is warranted.

NO IMPACT

a.4. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?*

The proposed project would replace an existing gymnasium on the Eureka High School campus. It would not increase school capacity or induce population growth. It would be anticipated to provide an enhanced delivery of recreation services through upgrades to gymnasium facilities. The proposed project would not result in substantial adverse impacts to existing park facilities or impact the need for additional park facilities. There would be no impact and no further analysis in an EIR is warranted.

NO IMPACT

a.5. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?*

The proposed project would replace an existing gymnasium on the Eureka High School campus. It would not increase school capacity or induce population growth. Therefore, it would not result in substantial adverse impacts to existing government facilities or impact the need for additional facilities, such as libraries, roadways, and infrastructure. There would be no impact to government services and no further analysis in an EIR is warranted.

NO IMPACT

15 Recreation

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in any of the following impacts?				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated	☐	☐	☐	■
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment	☐	☐	☐	■

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

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

The proposed project would replace an existing gymnasium on the Eureka High School campus. It would not increase school capacity or induce population growth. Therefore, it would not increase the use of existing recreational facilities, require the construction of new facilities, or require expansion of existing recreational facilities. The proposed project would replace an older gymnasium that does not currently meet state standards for earthquake safety or ADA accessibility requirements. Environmental impacts of the recreational facilities that would be provided by the proposed gym are evaluated in this Initial Study. There would be no adverse impact to recreational facilities or resulting from new recreational facilities and no further analysis in an EIR is warranted.

NO IMPACT

16 Transportation

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in any of the following impacts?				
a. Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	■	☐
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	■	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	■
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	■	☐
e. Result in inadequate emergency access?	☐	■	☐	☐
f. Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	☐	☐	■	☐

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

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

f. *Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?*

The proposed project would replace an existing gymnasium on the Eureka High School campus, reconfigure an existing bus lane, and provide new parking areas and concrete walkways. Construction would generate temporary construction-related traffic such as deliveries of equipment and materials to the project site and construction worker traffic. However, this traffic would be temporary and limited to the duration of the construction schedule.

Operation of the replacement gymnasium would not increase the student population or result in any new uses that would generate net new trips associated with the project site. However, the proposed reconfiguration of the bus lane and parking areas would change the vehicle exit routes of buses and vehicles relative to existing conditions at the project site. Currently, school buses and vehicles exit onto J Street. Implementation of the propose project would require buses and vehicles to exit onto K Street or Trinity Street. However, the level of bus traffic associated with the existing bus lane is minimal—eight school buses drop off students in the morning and nine school buses pick up students in the afternoon—and would be limited to specific hours corresponding to the start and end of the school day. In addition, personal vehicle traffic that would utilize the proposed driveway and new parking areas would primarily be generated by sports events. Sports events, such as basketball games, typically occur once or twice a week in the evenings during the school year (Eureka City Schools 2016). Therefore, the proposed project is not expected to result in a significant increase of traffic along K Street or Trinity Street.

The project site is on an existing high school campus and would not impact existing public transit facilities and there are no bike facilities in the vicinity of the project site. The proposed project would provide new concrete walkways that would improve pedestrian access on campus and, in combination with reconfiguration of the bus lane, would provide vehicle-free pedestrian access to the proposed bus loop, new gymnasium, and parking areas. As such, the proposed project would improve pedestrian facilities on campus.

The proposed project would not be expected to affect the performance and facilities for area circulation, congestion, public transit, and alternative modes of transportation. Therefore, the proposed project would not conflict with applicable plans or programs to manage circulation and congestion and there would be a less than significant impact on transit, congestion, or transit facilities and further analysis of these issues in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The project site is located approximately 2.5 miles southwest of the Murray Field-Eka Airport, 2.8 miles northeast of the Samoa Field Airport, and about 13 miles southwest of the Arcata-Eureka Airport in McKinleyville. The project site is not located within an influence area for any of these airports (Humboldt County 2007) and no other airports or private airstrips are located in the project vicinity. Therefore, no impact to air traffic patterns would occur, and further analysis in an EIR is not warranted.

NO IMPACT

d. Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

e. Would the project result in inadequate emergency access?

The proposed project would involve demolition of an existing gymnasium, construction of a new gymnasium, reconfiguration of an existing bus lane, and construction of new parking areas and concrete walkways on the Eureka High School campus. The two streets that currently comprise the bus lane, Humboldt Street and K Street, are private roads owned by Eureka City Schools. No alterations to surrounding public roads would occur and the proposed project would not generateany net new vehicle trips. Construction of the replacement gymnasium would comply with CBC standards, and structures and accesses would comply with California Fire Code Section 90, as well as Humboldt County Fire Chief's Fire & Life Safety Standards, which set requirements for roads and driveways to ensure adequate emergency access (Eureka 2003). Construction and operation of the proposed project would not result in use of vehicles or equipment, such as farm equipment or tractors, that would be incompatible with existing land uses in the surrounding area.

During operation, the project site would continue to provide access between the fire road that runs through the staff parking lot north of the existing gymnasium site and the bus lane (see Figure 5). However, construction activities, especially demolition activities and reconfiguration of the bus lane, could temporarily restrict use of the fire access road on the project site. To ensure emergency response vehicles have adequate access to the project site and vicinity during construction, the following mitigation would be incorporated.

Mitigation Measure

The following mitigation measure is required to reduce impacts to emergency access during construction activities to a less than significant level.

T-1 Prior to issuance of building and/ or grading permits, Eureka City Schools shall submit a Construction Emergency Access Plan to the Humboldt County Fire Department and Eureka Public Works department) for review and approval. This plan would detail how emergency access to the project would be maintained during construction, and include measures to ensure adequate emergency access during project construction, such as providing signage for altered fire routes, if needed.

Preparation, review, and implementation of a Construction Emergency Access Plan would ensure adequate emergency access during project construction. Impacts due to a design feature or modification to emergency access would be less than significant with mitigation and further analysis in an EIR is not warranted.

POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED

17 Tribal Cultural Resources

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	■	□	□	□
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Cod Section 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significant of the resource to a California Native American tribe.	■	□	□	□

a, b Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is (a) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or (b) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 2024.1?

The project site is on the campus of an existing high school in an urban setting. The proposed project would involve minor excavation for construction of the replacement gymnasium in an area that has been previously disturbed and developed for school uses. The project would not disturb native soils and is not expected to affect a tribal cultural resource listed or eligible for listing in the state or local register of historical resources, or determined by the lead agency to be significant to a California Native American tribe. However, tribal consultation has been requested by the Wiyot tribe and the consultation process has been initiated to determine if any tribal cultural resources would be impacted by the project. Impacts will be further discussed and analyzed in an EIR after consultation is complete.

POTENTIALLY SIGNIFICANT IMPACT

18 Utilities and Service Systems

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in any of the following impacts?				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board	☐	☐	☐	■
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	☐	☐	☐	■
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	☐	☐	☐	■
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed	☐	☐	☐	■
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	☐	☐	☐	■
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs	☐	☐	☐	■
g. Comply with federal, state, and local statutes and regulations related to solid waste	☐	☐	☐	■

a. Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b. Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c. Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

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

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

The project site is located within the jurisdiction of the North Coast Regional Water Quality Control Board (NCRWQCB). Wastewater is treated at the City of Eureka's wastewater treatment facilities, which include a 5.2 million gallon per day treatment plant utilizing the trickling filter/solids contact process (Eureka 2000a). Water service is also provided by the City of Eureka, which has 22.3 million gallons of storage reservoirs and four potable water boost stations (Eureka 2000). Eureka experiences large amounts of rainfall with some areas receiving more than 100 inches of precipitation in a year (Eureka 2011). Consequently, water supply is not an issue of concern for new development (Eureka 2011). The City of Eureka purchases groundwater from the Humboldt Bay Municipal Water District (HBMWD), which draws water from wells located in the bed of the Mad River just northeast of Arcata. Water is treated by the HBMWD and then delivered by a pipeline to the City's water treatment complex in Eureka where it undergoes additional treatment (Eureka 2013). Wastewater and potable water treatment facilities are designed to meet NCRWQCB standards.

The proposed project would continue to be served by the existing sewerage, domestic water, and storm drain infrastructure on the project site. The proposed project would not increase school capacity and therefore, would not increase the service population for onsite utilities. Proposed gymnasium facilities would be similar to existing gymnasium uses. Like the existing gymnasium, the new gymnasium would include a basketball court/ indoor court with seating, weight rooms, and locker room. Unlike the existing gymnasium, however, it would not have an indoor pool. Therefore, operation of the proposed project would generate no net new wastewater, and would, in fact likely decrease wastewater generation because it would not have an indoor pool and would be constructed in accordance with 2016 CBC standards, whereas the existing gymnasium was first constructed in 1948. As the proposed project would not increase wastewater generation, water use, or storm drain use relative to existing conditions, there would be no impact to stormwater drainage facilities, water supplies, or wastewater treatment and further analysis in an EIR is not warranted.

NO IMPACT

f. Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

The City of Eureka has a mandatory/universal garbage and recycling collection program to help the City meet State recycling/waste diversion mandates, such as AB 341 and 1826 (Eureka 2000b). Curbside collection and waste hauling in the Eureka area is provided by Recology (HWMA 2016), which actively promotes waste reduction in its service areas. Collected waste is sent to the Hawthorne Street Transfer Station and Recycling Center, which is managed by the Humboldt Waste Management Authority (HWMA) and located about a mile and a half away from the project site (HWMA 2016). Any waste that cannot be diverted is sent to Potrero Hills Landfill in Solano County (HWMA pers. comm. 2016)

The proposed project would not substantially alter existing uses on the project, and, therefore, would not induce growth in the student population that could increase solid waste generation compared to the current use. In addition, gymnasiums are responsible for a relatively small portion of a school's solid waste. Non-recyclable waste produced by education facilities in Humboldt County is composed primarily

of food waste (33%), as well as other organics, other food-related waste, like compostable paper products, and paper products, like office paper (CalRecycle 2016a).

Demolition of the existing gymnasium and construction of the replacement gymnasium would be a temporary source of additional solid waste. The proposed project would involve the demolition of the existing gymnasium, which is approximately 40,075 sf in size. Waste management facilities serving Eureka would have ample capacity to handle one-time construction and demolition (C & D) waste. The Hawthorne Street Transfer Station has a capacity of 200,750 tons per year and can process up to 550 tons per day (CalRecycle 2016b). Potrero Hills Landfill has a capacity of 83,100,000 cubic yards, can process up to 4,330 tons of solid waste per day, and has a remaining capacity of 13,872,000 cubic yards as of 2006 (CalRecycle 2016c). Therefore, the proposed project would be served by a landfill with sufficient capacity to accommodate its solid waste needs. There would be a less than significant impact and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

g. Would the project comply with federal, state, and local statutes and regulations related to solid waste?

The proposed project would comply with applicable state regulations, which include new requirements in the 2016 CBC to divert at least 65 percent construction and demolition waste for non-residential construction projects. There would be no impact and further analysis of this issue in an EIR is not warranted.

NO IMPACT

19 Mandatory Findings of Significance

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
a. Does the project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	■	□	□	□
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	■	□	□	□
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	□	■	□	□

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

As noted in Section 4, *Biological Resources*, the project site is on a fully developed and extensively paved high school campus that does not support native biological resources habitat. The site does not support any sensitive natural communities. The existing Jay Willard Gymnasium has not been previously identified as a potential historic resource in prior surveys of historic resources and is therefore not listed as a resource in the National Register of Historic Places, the California Register of Historical Resources, nor in the City of Eureka Local Register of Historic Places. However, it has been identified as historic by a local heritage society. Impacts to cultural resources, including impacts to historic resources, archaeological resources, paleontological resources, human remains and tribal cultural resources will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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

As described in the discussion of environmental checklist Sections 1 through 17, with mitigation measures incorporated, the proposed project would have no impact or a less than significant impact with respect to all environmental resource areas, except for Cultural Resources and Tribal Cultural Resources. The proposed project would not substantially alter existing uses on the project site, which include a bus lane, gymnasium, and parking areas. Consequently, operation of the proposed project would not augment environmental impacts relative to existing conditions and could potentially reduce certain environmental impacts, such as operational noise impacts, by replacing a gymnasium constructed in the 1940s with a newer structure subject to current CBC standards. Therefore, with respect to all environmental resource areas, excepting Cultural Resources and Tribal Cultural Resources, operation of the proposed project would have less than significant cumulative impacts.

Construction of the proposed project would result in new impacts to noise, air quality, greenhouse gas emissions, traffic, emergency access, and solid waste. However, these impacts would be temporary and limited to the duration of the construction schedule. Cumulative impacts of these resource areas have already been addressed in the individual resource sections (see CEQA Guidelines Section 15064(h)(3)). Incorporation of mitigation measures to reduce noise impacts have been provided in Section 12 and would reduce cumulatively significant impacts to less than significant levels. In addition, construction of the proposed project may potentially result in significant impacts to cultural resources, particularly historic resources and tribal cultural resources that may be cumulatively significant. Therefore, while the majority of cumulative impacts resulting from the proposed project would be less than significant, potentially cumulatively significant impacts to cultural and tribal resources warrant further analysis in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in the preceding sections, the proposed project would not result, either directly or indirectly in adverse hazards related to air quality, hazardous materials, or noise. As discussed in Section 3, *Air Quality,* emission of criteria pollutants associated with the proposed project would be minimal and primarily result from construction activities, which would be temporary and would be less than significant. As discussed in Section 8, *Hazards and Hazardous Materials,* the proposed project would not be located in an area containing hazardous materials and operation of the gymnasium would not require routine transport, handling or release of hazardous materials into the environment and would not result in substantial adverse effects on human beings. As discussed in Section 3, *Air Quality*, and Section 8, *Hazards and Hazardous Materials,* demolition of the existing gymnasium would comply with state and federal standards regulating lead and asbestos exposure and would not expose students or construction workers to harmful levels of lead or asbestos. Section 12, *Noise,* concluded that the proposed project would result in noise impacts associated with construction activities, but that these could be mitigated to less than significant levels by restricting the timing of construction activities and/or distance to school uses, and implementing mitigation measures, such as mufflers and acoustical barriers. Section 16, *Transportation*, identified that emergency access during construction activities may be restricted warranting preparation, review, and implementation of a Construction Emergency Access Plan. Overall, with mitigation incorporated, the proposed project would not result in significant environmental effects that could have a substantial adverse effect on human beings. Further analysis of this issue area in an EIR is not warranted.

POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED

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List of Preparers

Rincon Consultants, Inc. (Rincon) prepared this IS-NOP under contract to Eureka City Schools. Rincon personnel involved in project management, data gathering, analysis, and quality control include the following:

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Appendix A

Air Quality and Greenhouse Gas Emissions Modeling Results

Eureka High School Gym Replacement Project

Humboldt County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Health Club	40.08	1000sqft	2.60	29,940.00	0
Parking Lot	133.00	Space	1.20	53,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	103
Climate Zone	1			**Operational Year**	2019
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 - Altered lot size of health club to get total lot size of 3.8 acres. Number of parking spaces area as shown on proposed site plan.

Construction Phase - Architectural Coating phase modified to begin halfway through building construction, rather than at end of paving, to better reflect actual construction practices.

Demolition -

Waste Mitigation -

Construction Off-road Equipment Mitigation - Assumed all equipment except generator sets would be Tier 2 as USEPA mandated Tier 2 emissions standards for most engines (except generator sets) starting 2004.

Eureka High School Gym Replacement Project - Humboldt County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	18.00	160.00
tblConstructionPhase	PhaseEndDate	7/26/2018	7/9/2018
tblConstructionPhase	PhaseStartDate	7/3/2018	11/28/2017
tblLandUse	BuildingSpaceSquareFeet	40,080.00	29,940.00
tblLandUse	LandUseSquareFeet	40,080.00	29,940.00
tblLandUse	LotAcreage	0.92	2.60
tblProjectCharacteristics	OperationalYear	2018	2019

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					
2017	8.6094	52.4723	25.0800	0.0475	18.2141	2.8803	21.0944	9.9699	2.6498	12.6197	0.0000	4,822.1279	4,822.1279	1.2075	0.0000	4,849.9968
2018	8.0943	28.0293	23.3830	0.0373	0.4395	1.6787	2.1182	0.1187	1.5874	1.7061	0.0000	3,652.8420	3,652.8420	0.7236	0.0000	3,670.9316
Maximum	**8.6094**	**52.4723**	**25.0800**	**0.0475**	**18.2141**	**2.8803**	**21.0944**	**9.9699**	**2.6498**	**12.6197**	**0.0000**	**4,822.1279**	**4,822.1279**	**1.2075**	**0.0000**	**4,849.9968**

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					
2017	7.1503	36.6044	26.7416	0.0475	8.2777	1.3008	9.2255	4.5080	1.2992	5.4558	0.0000	4,822.1279	4,822.1279	1.2075	0.0000	4,849.9968
2018	7.0397	28.3327	24.9302	0.0373	0.4395	1.2567	1.6963	0.1187	1.2554	1.3741	0.0000	3,652.8420	3,652.8420	0.7236	0.0000	3,670.9316
Maximum	**7.1503**	**36.6044**	**26.7416**	**0.0475**	**8.2777**	**1.3008**	**9.2255**	**4.5080**	**1.2992**	**5.4558**	**0.0000**	**4,822.1279**	**4,822.1279**	**1.2075**	**0.0000**	**4,849.9968**

	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	**15.05**	**19.33**	**-6.62**	**0.00**	**53.27**	**43.90**	**52.95**	**54.14**	**39.71**	**52.33**	**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	0.8615	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405
Energy	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679
Mobile	4.1822	20.1803	44.8794	0.0698	4.8773	0.1423	5.0196	1.3088	0.1348	1.4436		7,021.0446	7,021.0446	0.5537		7,034.8881
Total	**5.0468**	**20.2089**	**44.9211**	**0.0700**	**4.8773**	**0.1445**	**5.0218**	**1.3088**	**0.1370**	**1.4458**		**7,055.1480**	**7,055.1480**	**0.5545**	**6.2000e-004**	**7,069.1965**

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	0.8615	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405
Energy	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679
Mobile	4.1822	20.1803	44.8794	0.0698	4.8773	0.1423	5.0196	1.3088	0.1348	1.4436		7,021.0446	7,021.0446	0.5537		7,034.8881
Total	**5.0468**	**20.2089**	**44.9211**	**0.0700**	**4.8773**	**0.1445**	**5.0218**	**1.3088**	**0.1370**	**1.4458**		**7,055.1480**	**7,055.1480**	**0.5545**	**6.2000e-004**	**7,069.1965**

	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	6/5/2017	6/30/2017	5	20	
2	Site Preparation	Site Preparation	7/1/2017	7/7/2017	5	5	
3	Grading	Grading	7/8/2017	7/19/2017	5	8	
4	Building Construction	Building Construction	7/20/2017	6/6/2018	5	230	
5	Architectural Coating	Architectural Coating	11/28/2017	7/9/2018	5	160	
6	Paving	Paving	6/7/2018	7/2/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 44,910; Non-Residential Outdoor: 14,970; Striped Parking Area: 3,192 (Architectural Coating – sqft)

OffRoad Equipment

Eureka High School Gym Replacement Project - Humboldt County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	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
Demolition	6	15.00	0.00	182.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	35.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

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					1.9724	0.0000	1.9724	0.2986	0.0000	0.2986			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425		3,924.2833	3,924.2833	1.0730		3,951.1070
Total	**4.1031**	**42.7475**	**23.0122**	**0.0388**	**1.9724**	**2.1935**	**4.1659**	**0.2986**	**2.0425**	**2.3412**		**3,924.2833**	**3,924.2833**	**1.0730**		**3,951.1070**

3.2 Demolition - 2017

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	0.1458	3.7765	0.8108	7.3700e-003	0.1581	0.0399	0.1980	0.0433	0.0382	0.0814		771.7185	771.7185	0.0301		772.4712
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	0.1632	0.1641	1.2569	1.2800e-003	0.1232	1.4100e-003	0.1246	0.0327	1.3000e-003	0.0340		126.1260	126.1260	0.0117		126.4186
Total	**0.3090**	**3.9406**	**2.0677**	**8.6500e-003**	**0.2813**	**0.0413**	**0.3226**	**0.0759**	**0.0395**	**0.1154**		**897.8446**	**897.8446**	**0.0418**		**898.8898**

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					0.8876	0.0000	0.8876	0.1344	0.0000	0.1344			0.0000			0.0000
Off-Road	1.2617	32.6638	24.6739	0.0388		0.9135	0.9135		0.9135	0.9135	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070
Total	**1.2617**	**32.6638**	**24.6739**	**0.0388**	**0.8876**	**0.9135**	**1.8011**	**0.1344**	**0.9135**	**1.0479**	**0.0000**	**3,924.2833**	**3,924.2833**	**1.0730**		**3,951.1070**

3.2 Demolition - 2017

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	0.1458	3.7765	0.8108	7.3700e-003	0.1581	0.0399	0.1980	0.0433	0.0382	0.0814		771.7185	771.7185	0.0301		772.4712
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	0.1632	0.1641	1.2569	1.2800e-003	0.1232	1.4100e-003	0.1246	0.0327	1.3000e-003	0.0340		126.1260	126.1260	0.0117		126.4186
Total	**0.3090**	**3.9406**	**2.0677**	**8.6500e-003**	**0.2813**	**0.0413**	**0.3226**	**0.0759**	**0.0395**	**0.1154**		**897.8446**	**897.8446**	**0.0418**		**898.8898**

3.3 Site Preparation - 2017

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483		3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9448**	**9.9307**	**2.6483**	**12.5790**		**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.3 Site Preparation - 2017

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	0.1958	0.1970	1.5083	1.5400e-003	0.1479	1.6900e-003	0.1496	0.0392	1.5600e-003	0.0408		151.3512	151.3512	0.0140		151.7024
Total	**0.1958**	**0.1970**	**1.5083**	**1.5400e-003**	**0.1479**	**1.6900e-003**	**0.1496**	**0.0392**	**1.5600e-003**	**0.0408**		**151.3512**	**151.3512**	**0.0140**		**151.7024**

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0380		0.9462	0.9462		0.9462	0.9462	0.0000	3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**1.2097**	**33.7214**	**22.9600**	**0.0380**	**8.1298**	**0.9462**	**9.0760**	**4.4688**	**0.9462**	**5.4150**	**0.0000**	**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.3 Site Preparation - 2017

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	0.1958	0.1970	1.5083	1.5400e-003	0.1479	1.6900e-003	0.1496	0.0392	1.5600e-003	0.0408		151.3512	151.3512	0.0140		151.7024
Total	**0.1958**	**0.1970**	**1.5083**	**1.5400e-003**	**0.1479**	**1.6900e-003**	**0.1496**	**0.0392**	**1.5600e-003**	**0.0408**		**151.3512**	**151.3512**	**0.0140**		**151.7024**

3.4 Grading - 2017

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**6.5523**	**1.7774**	**8.3298**	**3.3675**	**1.6352**	**5.0027**		**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.4 Grading - 2017

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	0.1632	0.1641	1.2569	1.2800e-003	0.1232	1.4100e-003	0.1246	0.0327	1.3000e-003	0.0340		126.1260	126.1260	0.0117		126.4186
Total	**0.1632**	**0.1641**	**1.2569**	**1.2800e-003**	**0.1232**	**1.4100e-003**	**0.1246**	**0.0327**	**1.3000e-003**	**0.0340**		**126.1260**	**126.1260**	**0.0117**		**126.4186**

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					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	1.0093	26.2791	18.9906	0.0297		0.7725	0.7725		0.7725	0.7725	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**1.0093**	**26.2791**	**18.9906**	**0.0297**	**2.9486**	**0.7725**	**3.7210**	**1.5154**	**0.7725**	**2.2879**	**0.0000**	**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.4 Grading - 2017

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	0.1632	0.1641	1.2569	1.2800e-003	0.1232	1.4100e-003	0.1246	0.0327	1.3000e-003	0.0340		126.1260	126.1260	0.0117		126.4186
Total	**0.1632**	**0.1641**	**1.2569**	**1.2800e-003**	**0.1232**	**1.4100e-003**	**0.1246**	**0.0327**	**1.3000e-003**	**0.0340**		**126.1260**	**126.1260**	**0.0117**		**126.4186**

3.5 Building Construction - 2017

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	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.5 Building Construction - 2017

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	0.1374	2.3408	0.8769	3.8800e-003	0.0945	0.0300	0.1245	0.0272	0.0287	0.0559		404.3611	404.3611	0.0267		405.0279
Worker	0.3808	0.3830	2.9328	2.9900e-003	0.2875	3.2800e-003	0.2908	0.0763	3.0400e-003	0.0793		294.2941	294.2941	0.0273		294.9768
Total	**0.5182**	**2.7237**	**3.8097**	**6.8700e-003**	**0.3820**	**0.0333**	**0.4153**	**0.1035**	**0.0317**	**0.1352**		**698.6552**	**698.6552**	**0.0540**		**700.0047**

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	1.3988	22.8111	17.5909	0.0269		0.9935	0.9935		0.9935	0.9935	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**1.3988**	**22.8111**	**17.5909**	**0.0269**		**0.9935**	**0.9935**		**0.9935**	**0.9935**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.5 Building Construction - 2017

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	0.1374	2.3408	0.8769	3.8800e-003	0.0945	0.0300	0.1245	0.0272	0.0287	0.0559		404.3611	404.3611	0.0267		405.0279
Worker	0.3808	0.3830	2.9328	2.9900e-003	0.2875	3.2800e-003	0.2908	0.0763	3.0400e-003	0.0793		294.2941	294.2941	0.0273		294.9768
Total	**0.5182**	**2.7237**	**3.8097**	**6.8700e-003**	**0.3820**	**0.0333**	**0.4153**	**0.1035**	**0.0317**	**0.1352**		**698.6552**	**698.6552**	**0.0540**		**700.0047**

3.5 Building Construction - 2018

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	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.5 Building Construction - 2018

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	0.1208	2.2169	0.7713	3.8800e-003	0.0945	0.0246	0.1191	0.0272	0.0235	0.0507		404.7962	404.7962	0.0251		405.4224
Worker	0.3564	0.3472	2.6476	2.9200e-003	0.2875	3.0800e-003	0.2906	0.0763	2.8500e-003	0.0791		288.0517	288.0517	0.0247		288.6699
Total	**0.4771**	**2.5641**	**3.4189**	**6.8000e-003**	**0.3820**	**0.0277**	**0.4097**	**0.1035**	**0.0264**	**0.1298**		**692.8480**	**692.8480**	**0.0498**		**694.0923**

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	1.3341	22.4603	17.5646	0.0269		0.9551	0.9551		0.9551	0.9551	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**1.3341**	**22.4603**	**17.5646**	**0.0269**		**0.9551**	**0.9551**		**0.9551**	**0.9551**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.5 Building Construction - 2018

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	0.1208	2.2169	0.7713	3.8800e-003	0.0945	0.0246	0.1191	0.0272	0.0235	0.0507		404.7962	404.7962	0.0251		405.4224
Worker	0.3564	0.3472	2.6476	2.9200e-003	0.2875	3.0800e-003	0.2906	0.0763	2.8500e-003	0.0791		288.0517	288.0517	0.0247		288.6699
Total	**0.4771**	**2.5641**	**3.4189**	**6.8000e-003**	**0.3820**	**0.0277**	**0.4097**	**0.1035**	**0.0264**	**0.1298**		**692.8480**	**692.8480**	**0.0498**		**694.0923**

3.6 Architectural Coating - 2017

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	4.5678					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**4.9001**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

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	0.0762	0.0766	0.5866	6.0000e-004	0.0575	6.6000e-004	0.0582	0.0153	6.1000e-004	0.0159		58.8588	58.8588	5.4600e-003		58.9954
Total	**0.0762**	**0.0766**	**0.5866**	**6.0000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0153**	**6.1000e-004**	**0.0159**		**58.8588**	**58.8588**	**5.4600e-003**		**58.9954**

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	4.5678					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**5.1571**	**3.2389**	**3.4172**	**2.9700e-003**		**0.2734**	**0.2734**		**0.2734**	**0.2734**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

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	0.0762	0.0766	0.5866	6.0000e-004	0.0575	6.6000e-004	0.0582	0.0153	6.1000e-004	0.0159		58.8588	58.8588	5.4600e-003		58.9954
Total	**0.0762**	**0.0766**	**0.5866**	**6.0000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0153**	**6.1000e-004**	**0.0159**		**58.8588**	**58.8588**	**5.4600e-003**		**58.9954**

3.6 Architectural Coating - 2018

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	4.5678					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**4.8664**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

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	0.0713	0.0694	0.5295	5.8000e-004	0.0575	6.2000e-004	0.0581	0.0153	5.7000e-004	0.0158		57.6104	57.6104	4.9400e-003		57.7340
Total	**0.0713**	**0.0694**	**0.5295**	**5.8000e-004**	**0.0575**	**6.2000e-004**	**0.0581**	**0.0153**	**5.7000e-004**	**0.0158**		**57.6104**	**57.6104**	**4.9400e-003**		**57.7340**

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	4.5678					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**5.1571**	**3.2389**	**3.4172**	**2.9700e-003**		**0.2734**	**0.2734**		**0.2734**	**0.2734**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

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	0.0713	0.0694	0.5295	5.8000e-004	0.0575	6.2000e-004	0.0581	0.0153	5.7000e-004	0.0158		57.6104	57.6104	4.9400e-003		57.7340
Total	**0.0713**	**0.0694**	**0.5295**	**5.8000e-004**	**0.0575**	**6.2000e-004**	**0.0581**	**0.0153**	**5.7000e-004**	**0.0158**		**57.6104**	**57.6104**	**4.9400e-003**		**57.7340**

3.7 Paving - 2018

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	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718		1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5986**	**14.5184**	**12.4333**	**0.0189**		**0.8370**	**0.8370**		**0.7718**	**0.7718**		**1,872.5505**	**1,872.5505**	**0.5672**		**1,886.7312**

3.7 Paving - 2018

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	0.2036	0.1984	1.5129	1.6700e-003	0.1643	1.7600e-003	0.1661	0.0436	1.6300e-003	0.0452		164.6010	164.6010	0.0141		164.9542
Total	**0.2036**	**0.1984**	**1.5129**	**1.6700e-003**	**0.1643**	**1.7600e-003**	**0.1661**	**0.0436**	**1.6300e-003**	**0.0452**		**164.6010**	**164.6010**	**0.0141**		**164.9542**

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	0.7524	16.0849	13.5323	0.0189		0.5601	0.5601		0.5601	0.5601	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9271**	**16.0849**	**13.5323**	**0.0189**		**0.5601**	**0.5601**		**0.5601**	**0.5601**	**0.0000**	**1,872.5505**	**1,872.5505**	**0.5672**		**1,886.7312**

3.7 Paving - 2018

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	0.2036	0.1984	1.5129	1.6700e-003	0.1643	1.7600e-003	0.1661	0.0436	1.6300e-003	0.0452		164.6010	164.6010	0.0141		164.9542
Total	**0.2036**	**0.1984**	**1.5129**	**1.6700e-003**	**0.1643**	**1.7600e-003**	**0.1661**	**0.0436**	**1.6300e-003**	**0.0452**		**164.6010**	**164.6010**	**0.0141**		**164.9542**

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	4.1822	20.1803	44.8794	0.0698	4.8773	0.1423	5.0196	1.3088	0.1348	1.4436		7,021.0446	7,021.0446	0.5537		7,034.8881
Unmitigated	4.1822	20.1803	44.8794	0.0698	4.8773	0.1423	5.0196	1.3088	0.1348	1.4436		7,021.0446	7,021.0446	0.5537		7,034.8881

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	1,319.83	836.47	1071.34	2,099,603	2,099,603
Parking Lot	0.00	0.00	0.00		
Total	1,319.83	836.47	1,071.34	2,099,603	2,099,603

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
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Health Club	0.459523	0.056060	0.207286	0.143189	0.053205	0.008548	0.014776	0.043712	0.003050	0.001807	0.006178	0.001540	0.001126
Parking Lot	0.459523	0.056060	0.207286	0.143189	0.053205	0.008548	0.014776	0.043712	0.003050	0.001807	0.006178	0.001540	0.001126

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	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679
NaturalGas Unmitigated	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679

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					
Health Club	289.557	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679
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
Total		**3.1200e-003**	**0.0284**	**0.0239**	**1.7000e-004**		**2.1600e-003**	**2.1600e-003**		**2.1600e-003**	**2.1600e-003**		**34.0655**	**34.0655**	**6.5000e-004**	**6.2000e-004**	**34.2679**

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					
Health Club	0.289557	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679
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
Total		**3.1200e-003**	**0.0284**	**0.0239**	**1.7000e-004**		**2.1600e-003**	**2.1600e-003**		**2.1600e-003**	**2.1600e-003**		**34.0655**	**34.0655**	**6.5000e-004**	**6.2000e-004**	**34.2679**

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	0.8615	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405
Unmitigated	0.8615	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405

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	0.2002					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6596					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.6900e-003	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405
Total	**0.8615**	**1.7000e-004**	**0.0178**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0379**	**0.0379**	**1.0000e-004**		**0.0405**

6.2 Area by SubCategory

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	0.2002					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6596					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.6900e-003	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405
Total	**0.8615**	**1.7000e-004**	**0.0178**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0379**	**0.0379**	**1.0000e-004**		**0.0405**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Eureka High School Gym Replacement Project

Humboldt County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Health Club	40.08	1000sqft	2.60	29,940.00	0
Parking Lot	133.00	Space	1.20	53,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	103
Climate Zone	1			**Operational Year**	2019
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 - Altered lot size of health club to get total lot size of 3.8 acres. Number of parking spaces area as shown on proposed site plan.

Construction Phase - Architectural Coating phase modified to begin halfway through building construction, rather than at end of paving, to better reflect actual construction practices.

Demolition -

Waste Mitigation -

Construction Off-road Equipment Mitigation - Assumed all equipment except generator sets would be Tier 2 as USEPA mandated Tier 2 emissions standards for most engines (except generator sets) starting 2004.

Eureka High School Gym Replacement Project - Humboldt County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	18.00	160.00
tblConstructionPhase	PhaseEndDate	7/26/2018	7/9/2018
tblConstructionPhase	PhaseStartDate	7/3/2018	11/28/2017
tblLandUse	BuildingSpaceSquareFeet	40,080.00	29,940.00
tblLandUse	LandUseSquareFeet	40,080.00	29,940.00
tblLandUse	LotAcreage	0.92	2.60
tblProjectCharacteristics	OperationalYear	2018	2019

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					
2017	8.5247	52.4390	24.9019	0.0476	18.2141	2.8803	21.0944	9.9699	2.6498	12.6197	0.0000	4,835.0083	4,835.0083	1.2070	0.0000	4,862.8020
2018	8.0149	27.9342	23.0375	0.0374	0.4395	1.6782	2.1177	0.1187	1.5869	1.7056	0.0000	3,664.3672	3,664.3672	0.7204	0.0000	3,682.3779
Maximum	**8.5247**	**52.4390**	**24.9019**	**0.0476**	**18.2141**	**2.8803**	**21.0944**	**9.9699**	**2.6498**	**12.6197**	**0.0000**	**4,835.0083**	**4,835.0083**	**1.2070**	**0.0000**	**4,862.8020**

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					
2017	7.0657	36.5043	26.5636	0.0476	8.2777	1.3002	9.2255	4.5080	1.2986	5.4558	0.0000	4,835.0083	4,835.0083	1.2070	0.0000	4,862.8020
2018	6.9602	28.2376	24.5847	0.0374	0.4395	1.2562	1.6958	0.1187	1.2549	1.3736	0.0000	3,664.3672	3,664.3672	0.7204	0.0000	3,682.3779
Maximum	**7.0657**	**36.5043**	**26.5636**	**0.0476**	**8.2777**	**1.3002**	**9.2255**	**4.5080**	**1.2986**	**5.4558**	**0.0000**	**4,835.0083**	**4,835.0083**	**1.2070**	**0.0000**	**4,862.8020**

	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	**15.20**	**19.45**	**-6.69**	**0.00**	**53.27**	**43.92**	**52.95**	**54.14**	**39.73**	**52.33**	**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	0.8615	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405
Energy	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679
Mobile	4.0652	19.2409	39.7788	0.0707	4.8773	0.1388	5.0161	1.3088	0.1315	1.4403		7,121.8242	7,121.8242	0.5190		7,134.7990
Total	**4.9298**	**19.2694**	**39.8205**	**0.0709**	**4.8773**	**0.1411**	**5.0184**	**1.3088**	**0.1337**	**1.4425**		**7,155.9276**	**7,155.9276**	**0.5197**	**6.2000e-004**	**7,169.1074**

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	0.8615	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405
Energy	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679
Mobile	4.0652	19.2409	39.7788	0.0707	4.8773	0.1388	5.0161	1.3088	0.1315	1.4403		7,121.8242	7,121.8242	0.5190		7,134.7990
Total	**4.9298**	**19.2694**	**39.8205**	**0.0709**	**4.8773**	**0.1411**	**5.0184**	**1.3088**	**0.1337**	**1.4425**		**7,155.9276**	**7,155.9276**	**0.5197**	**6.2000e-004**	**7,169.1074**

	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	6/5/2017	6/30/2017	5	20	
2	Site Preparation	Site Preparation	7/1/2017	7/7/2017	5	5	
3	Grading	Grading	7/8/2017	7/19/2017	5	8	
4	Building Construction	Building Construction	7/20/2017	6/6/2018	5	230	
5	Architectural Coating	Architectural Coating	11/28/2017	7/9/2018	5	160	
6	Paving	Paving	6/7/2018	7/2/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 44,910; Non-Residential Outdoor: 14,970; Striped Parking Area: 3,192 (Architectural Coating – sqft)

OffRoad Equipment

Eureka High School Gym Replacement Project - Humboldt County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	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
Demolition	6	15.00	0.00	182.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	35.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

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					1.9724	0.0000	1.9724	0.2986	0.0000	0.2986			0.0000			0.0000
Off-Road	4.1031	42.7475	23.0122	0.0388		2.1935	2.1935		2.0425	2.0425		3,924.2833	3,924.2833	1.0730		3,951.1070
Total	**4.1031**	**42.7475**	**23.0122**	**0.0388**	**1.9724**	**2.1935**	**4.1659**	**0.2986**	**2.0425**	**2.3412**		**3,924.2833**	**3,924.2833**	**1.0730**		**3,951.1070**

3.2 Demolition - 2017

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	0.1415	3.7041	0.7368	7.4900e-003	0.1581	0.0392	0.1973	0.0433	0.0375	0.0808		784.2098	784.2098	0.0275		784.8971
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	0.1357	0.1364	1.1529	1.2800e-003	0.1232	1.4100e-003	0.1246	0.0327	1.3000e-003	0.0340		126.5152	126.5152	0.0113		126.7980
Total	**0.2772**	**3.8405**	**1.8897**	**8.7700e-003**	**0.2813**	**0.0407**	**0.3220**	**0.0759**	**0.0388**	**0.1148**		**910.7249**	**910.7249**	**0.0388**		**911.6951**

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					0.8876	0.0000	0.8876	0.1344	0.0000	0.1344			0.0000			0.0000
Off-Road	1.2617	32.6638	24.6739	0.0388		0.9135	0.9135		0.9135	0.9135	0.0000	3,924.2833	3,924.2833	1.0730		3,951.1070
Total	**1.2617**	**32.6638**	**24.6739**	**0.0388**	**0.8876**	**0.9135**	**1.8011**	**0.1344**	**0.9135**	**1.0479**	**0.0000**	**3,924.2833**	**3,924.2833**	**1.0730**		**3,951.1070**

3.2 Demolition - 2017

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	0.1415	3.7041	0.7368	7.4900e-003	0.1581	0.0392	0.1973	0.0433	0.0375	0.0808		784.2098	784.2098	0.0275		784.8971
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	0.1357	0.1364	1.1529	1.2800e-003	0.1232	1.4100e-003	0.1246	0.0327	1.3000e-003	0.0340		126.5152	126.5152	0.0113		126.7980
Total	**0.2772**	**3.8405**	**1.8897**	**8.7700e-003**	**0.2813**	**0.0407**	**0.3220**	**0.0759**	**0.0388**	**0.1148**		**910.7249**	**910.7249**	**0.0388**		**911.6951**

3.3 Site Preparation - 2017

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483		3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9448**	**9.9307**	**2.6483**	**12.5790**		**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.3 Site Preparation - 2017

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	0.1628	0.1637	1.3835	1.5400e-003	0.1479	1.6900e-003	0.1496	0.0392	1.5600e-003	0.0408		151.8182	151.8182	0.0136		152.1576
Total	**0.1628**	**0.1637**	**1.3835**	**1.5400e-003**	**0.1479**	**1.6900e-003**	**0.1496**	**0.0392**	**1.5600e-003**	**0.0408**		**151.8182**	**151.8182**	**0.0136**		**152.1576**

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0380		0.9462	0.9462		0.9462	0.9462	0.0000	3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**1.2097**	**33.7214**	**22.9600**	**0.0380**	**8.1298**	**0.9462**	**9.0760**	**4.4688**	**0.9462**	**5.4150**	**0.0000**	**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.3 Site Preparation - 2017

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	0.1628	0.1637	1.3835	1.5400e-003	0.1479	1.6900e-003	0.1496	0.0392	1.5600e-003	0.0408		151.8182	151.8182	0.0136		152.1576
Total	**0.1628**	**0.1637**	**1.3835**	**1.5400e-003**	**0.1479**	**1.6900e-003**	**0.1496**	**0.0392**	**1.5600e-003**	**0.0408**		**151.8182**	**151.8182**	**0.0136**		**152.1576**

3.4 Grading - 2017

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**6.5523**	**1.7774**	**8.3298**	**3.3675**	**1.6352**	**5.0027**		**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.4 Grading - 2017

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	0.1357	0.1364	1.1529	1.2800e-003	0.1232	1.4100e-003	0.1246	0.0327	1.3000e-003	0.0340		126.5152	126.5152	0.0113		126.7980
Total	**0.1357**	**0.1364**	**1.1529**	**1.2800e-003**	**0.1232**	**1.4100e-003**	**0.1246**	**0.0327**	**1.3000e-003**	**0.0340**		**126.5152**	**126.5152**	**0.0113**		**126.7980**

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					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	1.0093	26.2791	18.9906	0.0297		0.7725	0.7725		0.7725	0.7725	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**1.0093**	**26.2791**	**18.9906**	**0.0297**	**2.9486**	**0.7725**	**3.7210**	**1.5154**	**0.7725**	**2.2879**	**0.0000**	**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.4 Grading - 2017

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	0.1357	0.1364	1.1529	1.2800e-003	0.1232	1.4100e-003	0.1246	0.0327	1.3000e-003	0.0340		126.5152	126.5152	0.0113		126.7980
Total	**0.1357**	**0.1364**	**1.1529**	**1.2800e-003**	**0.1232**	**1.4100e-003**	**0.1246**	**0.0327**	**1.3000e-003**	**0.0340**		**126.5152**	**126.5152**	**0.0113**		**126.7980**

3.5 Building Construction - 2017

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	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.5 Building Construction - 2017

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	0.1298	2.3113	0.7746	3.9700e-003	0.0945	0.0294	0.1239	0.0272	0.0281	0.0553		414.2963	414.2963	0.0244		414.9062
Worker	0.3166	0.3182	2.6901	2.9900e-003	0.2875	3.2800e-003	0.2908	0.0763	3.0400e-003	0.0793		295.2020	295.2020	0.0264		295.8619
Total	**0.4464**	**2.6295**	**3.4647**	**6.9600e-003**	**0.3820**	**0.0327**	**0.4147**	**0.1035**	**0.0312**	**0.1346**		**709.4984**	**709.4984**	**0.0508**		**710.7681**

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	1.3988	22.8111	17.5909	0.0269		0.9935	0.9935		0.9935	0.9935	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**1.3988**	**22.8111**	**17.5909**	**0.0269**		**0.9935**	**0.9935**		**0.9935**	**0.9935**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.5 Building Construction - 2017

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	0.1298	2.3113	0.7746	3.9700e-003	0.0945	0.0294	0.1239	0.0272	0.0281	0.0553		414.2963	414.2963	0.0244		414.9062
Worker	0.3166	0.3182	2.6901	2.9900e-003	0.2875	3.2800e-003	0.2908	0.0763	3.0400e-003	0.0793		295.2020	295.2020	0.0264		295.8619
Total	**0.4464**	**2.6295**	**3.4647**	**6.9600e-003**	**0.3820**	**0.0327**	**0.4147**	**0.1035**	**0.0312**	**0.1346**		**709.4984**	**709.4984**	**0.0508**		**710.7681**

3.5 Building Construction - 2018

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	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.5 Building Construction - 2018

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	0.1140	2.1925	0.6794	3.9800e-003	0.0945	0.0241	0.1186	0.0272	0.0230	0.0502		415.2517	415.2517	0.0228		415.8228
Worker	0.2958	0.2883	2.4362	2.9200e-003	0.2875	3.0800e-003	0.2906	0.0763	2.8500e-003	0.0791		288.9432	288.9432	0.0239		289.5414
Total	**0.4098**	**2.4808**	**3.1156**	**6.9000e-003**	**0.3820**	**0.0271**	**0.4092**	**0.1035**	**0.0259**	**0.1293**		**704.1949**	**704.1949**	**0.0468**		**705.3642**

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	1.3341	22.4603	17.5646	0.0269		0.9551	0.9551		0.9551	0.9551	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**1.3341**	**22.4603**	**17.5646**	**0.0269**		**0.9551**	**0.9551**		**0.9551**	**0.9551**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.5 Building Construction - 2018

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	0.1140	2.1925	0.6794	3.9800e-003	0.0945	0.0241	0.1186	0.0272	0.0230	0.0502		415.2517	415.2517	0.0228		415.8228
Worker	0.2958	0.2883	2.4362	2.9200e-003	0.2875	3.0800e-003	0.2906	0.0763	2.8500e-003	0.0791		288.9432	288.9432	0.0239		289.5414
Total	**0.4098**	**2.4808**	**3.1156**	**6.9000e-003**	**0.3820**	**0.0271**	**0.4092**	**0.1035**	**0.0259**	**0.1293**		**704.1949**	**704.1949**	**0.0468**		**705.3642**

3.6 Architectural Coating - 2017

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	4.5678					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**4.9001**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

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	0.0633	0.0636	0.5380	6.0000e-004	0.0575	6.6000e-004	0.0582	0.0153	6.1000e-004	0.0159		59.0404	59.0404	5.2800e-003		59.1724
Total	**0.0633**	**0.0636**	**0.5380**	**6.0000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0153**	**6.1000e-004**	**0.0159**		**59.0404**	**59.0404**	**5.2800e-003**		**59.1724**

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	4.5678					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**5.1571**	**3.2389**	**3.4172**	**2.9700e-003**		**0.2734**	**0.2734**		**0.2734**	**0.2734**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

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	0.0633	0.0636	0.5380	6.0000e-004	0.0575	6.6000e-004	0.0582	0.0153	6.1000e-004	0.0159		59.0404	59.0404	5.2800e-003		59.1724
Total	**0.0633**	**0.0636**	**0.5380**	**6.0000e-004**	**0.0575**	**6.6000e-004**	**0.0582**	**0.0153**	**6.1000e-004**	**0.0159**		**59.0404**	**59.0404**	**5.2800e-003**		**59.1724**

3.6 Architectural Coating - 2018

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	4.5678					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**4.8664**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

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	0.0592	0.0577	0.4872	5.8000e-004	0.0575	6.2000e-004	0.0581	0.0153	5.7000e-004	0.0158		57.7886	57.7886	4.7900e-003		57.9083
Total	**0.0592**	**0.0577**	**0.4872**	**5.8000e-004**	**0.0575**	**6.2000e-004**	**0.0581**	**0.0153**	**5.7000e-004**	**0.0158**		**57.7886**	**57.7886**	**4.7900e-003**		**57.9083**

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	4.5678					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5893	3.2389	3.4172	2.9700e-003		0.2734	0.2734		0.2734	0.2734	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**5.1571**	**3.2389**	**3.4172**	**2.9700e-003**		**0.2734**	**0.2734**		**0.2734**	**0.2734**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

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	0.0592	0.0577	0.4872	5.8000e-004	0.0575	6.2000e-004	0.0581	0.0153	5.7000e-004	0.0158		57.7886	57.7886	4.7900e-003		57.9083
Total	**0.0592**	**0.0577**	**0.4872**	**5.8000e-004**	**0.0575**	**6.2000e-004**	**0.0581**	**0.0153**	**5.7000e-004**	**0.0158**		**57.7886**	**57.7886**	**4.7900e-003**		**57.9083**

3.7 Paving - 2018

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	1.4239	14.5184	12.4333	0.0189		0.8370	0.8370		0.7718	0.7718		1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5986**	**14.5184**	**12.4333**	**0.0189**		**0.8370**	**0.8370**		**0.7718**	**0.7718**		**1,872.5505**	**1,872.5505**	**0.5672**		**1,886.7312**

3.7 Paving - 2018

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	0.1690	0.1647	1.3921	1.6700e-003	0.1643	1.7600e-003	0.1661	0.0436	1.6300e-003	0.0452		165.1104	165.1104	0.0137		165.4523
Total	**0.1690**	**0.1647**	**1.3921**	**1.6700e-003**	**0.1643**	**1.7600e-003**	**0.1661**	**0.0436**	**1.6300e-003**	**0.0452**		**165.1104**	**165.1104**	**0.0137**		**165.4523**

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	0.7524	16.0849	13.5323	0.0189		0.5601	0.5601		0.5601	0.5601	0.0000	1,872.5505	1,872.5505	0.5672		1,886.7312
Paving	0.1747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9271**	**16.0849**	**13.5323**	**0.0189**		**0.5601**	**0.5601**		**0.5601**	**0.5601**	**0.0000**	**1,872.5505**	**1,872.5505**	**0.5672**		**1,886.7312**

3.7 Paving - 2018

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	0.1690	0.1647	1.3921	1.6700e-003	0.1643	1.7600e-003	0.1661	0.0436	1.6300e-003	0.0452		165.1104	165.1104	0.0137		165.4523
Total	**0.1690**	**0.1647**	**1.3921**	**1.6700e-003**	**0.1643**	**1.7600e-003**	**0.1661**	**0.0436**	**1.6300e-003**	**0.0452**		**165.1104**	**165.1104**	**0.0137**		**165.4523**

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	4.0652	19.2409	39.7788	0.0707	4.8773	0.1388	5.0161	1.3088	0.1315	1.4403		7,121.8242	7,121.8242	0.5190		7,134.7990
Unmitigated	4.0652	19.2409	39.7788	0.0707	4.8773	0.1388	5.0161	1.3088	0.1315	1.4403		7,121.8242	7,121.8242	0.5190		7,134.7990

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	1,319.83	836.47	1071.34	2,099,603	2,099,603
Parking Lot	0.00	0.00	0.00		
Total	1,319.83	836.47	1,071.34	2,099,603	2,099,603

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
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Health Club	0.459523	0.056060	0.207286	0.143189	0.053205	0.008548	0.014776	0.043712	0.003050	0.001807	0.006178	0.001540	0.001126
Parking Lot	0.459523	0.056060	0.207286	0.143189	0.053205	0.008548	0.014776	0.043712	0.003050	0.001807	0.006178	0.001540	0.001126

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	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679
NaturalGas Unmitigated	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679

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					
Health Club	289.557	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679
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
Total		**3.1200e-003**	**0.0284**	**0.0239**	**1.7000e-004**		**2.1600e-003**	**2.1600e-003**		**2.1600e-003**	**2.1600e-003**		**34.0655**	**34.0655**	**6.5000e-004**	**6.2000e-004**	**34.2679**

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					
Health Club	0.289557	3.1200e-003	0.0284	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003		34.0655	34.0655	6.5000e-004	6.2000e-004	34.2679
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
Total		**3.1200e-003**	**0.0284**	**0.0239**	**1.7000e-004**		**2.1600e-003**	**2.1600e-003**		**2.1600e-003**	**2.1600e-003**		**34.0655**	**34.0655**	**6.5000e-004**	**6.2000e-004**	**34.2679**

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	0.8615	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405
Unmitigated	0.8615	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405

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	0.2002					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6596					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.6900e-003	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405
Total	**0.8615**	**1.7000e-004**	**0.0178**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0379**	**0.0379**	**1.0000e-004**		**0.0405**

6.2 Area by SubCategory

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	0.2002					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6596					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.6900e-003	1.7000e-004	0.0178	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0379	0.0379	1.0000e-004		0.0405
Total	**0.8615**	**1.7000e-004**	**0.0178**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0379**	**0.0379**	**1.0000e-004**		**0.0405**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Eureka High School Gym Replacement Project

Humboldt County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Health Club	40.08	1000sqft	2.60	29,940.00	0
Parking Lot	133.00	Space	1.20	53,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	103
Climate Zone	1			**Operational Year**	2019
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 - Altered lot size of health club to get total lot size of 3.8 acres. Number of parking spaces area as shown on proposed site plan.

Construction Phase - Architectural Coating phase modified to begin halfway through building construction, rather than at end of paving, to better reflect actual construction practices.

Demolition -

Waste Mitigation -

Construction Off-road Equipment Mitigation - Assumed all equipment except generator sets would be Tier 2 as USEPA mandated Tier 2 emissions standards for most engines (except generator sets) starting 2004.

Eureka High School Gym Replacement Project - Humboldt County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 1
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	18.00	160.00
tblConstructionPhase	PhaseEndDate	7/26/2018	7/9/2018
tblConstructionPhase	PhaseStartDate	7/3/2018	11/28/2017
tblLandUse	BuildingSpaceSquareFeet	40,080.00	29,940.00
tblLandUse	LandUseSquareFeet	40,080.00	29,940.00
tblLandUse	LotAcreage	0.92	2.60
tblProjectCharacteristics	OperationalYear	2018	2019

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					
2017	0.3393	2.4695	1.6899	2.7200e-003	0.1163	0.1453	0.2615	0.0481	0.1361	0.1843	0.0000	246.3122	246.3122	0.0541	0.0000	247.6639
2018	0.5274	1.7361	1.4626	2.3400e-003	0.0254	0.1041	0.1295	6.8800e-003	0.0984	0.1053	0.0000	207.7821	207.7821	0.0421	0.0000	208.8339
Maximum	**0.5274**	**2.4695**	**1.6899**	**2.7200e-003**	**0.1163**	**0.1453**	**0.2615**	**0.0481**	**0.1361**	**0.1843**	**0.0000**	**246.3122**	**246.3122**	**0.0541**	**0.0000**	**247.6639**

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					
2017	0.1960	2.0855	1.6968	2.7200e-003	0.0661	0.0783	0.1445	0.0254	0.0782	0.1037	0.0000	246.3120	246.3120	0.0541	0.0000	247.6637
2018	0.4651	1.7815	1.5778	2.3400e-003	0.0254	0.0792	0.1046	6.8800e-003	0.0791	0.0860	0.0000	207.7819	207.7819	0.0421	0.0000	208.8337
Maximum	**0.4651**	**2.0855**	**1.6968**	**2.7200e-003**	**0.0661**	**0.0792**	**0.1445**	**0.0254**	**0.0791**	**0.1037**	**0.0000**	**246.3120**	**246.3120**	**0.0541**	**0.0000**	**247.6637**

	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	**23.73**	**8.05**	**-3.88**	**0.00**	**35.38**	**36.83**	**36.30**	**41.27**	**32.90**	**34.49**	**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	6-5-2017	9-4-2017	1.3264	1.0175
2	9-5-2017	12-4-2017	1.0862	0.9120
3	12-5-2017	3-4-2018	1.1999	1.1430
4	3-5-2018	6-4-2018	1.1829	1.1582
5	6-5-2018	9-4-2018	0.2608	0.2865
		Highest	1.3264	1.1582

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	0.1571	1.0000e-005	1.6100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0900e-003	3.0900e-003	1.0000e-005	0.0000	3.3000e-003
Energy	5.7000e-004	5.1800e-003	4.3500e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	57.2344	57.2344	2.4400e-003	5.9000e-004	57.4700
Mobile	0.6874	3.2776	7.0403	0.0118	0.7684	0.0235	0.7919	0.2073	0.0223	0.2296	0.0000	1,076.2294	1,076.2294	0.0811	0.0000	1,078.2569
Waste						0.0000	0.0000		0.0000	0.0000	46.3753	0.0000	46.3753	2.7407	0.0000	114.8929
Water						0.0000	0.0000		0.0000	0.0000	0.7520	5.2107	5.9627	0.0775	1.8700e-003	8.4577
Total	**0.8451**	**3.2828**	**7.0463**	**0.0118**	**0.7684**	**0.0239**	**0.7923**	**0.2073**	**0.0227**	**0.2300**	**47.1274**	**1,138.6775**	**1,185.8049**	**2.9017**	**2.4600e-003**	**1,259.0807**

2.2 Overall Operational

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	0.1571	1.0000e-005	1.6100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0900e-003	3.0900e-003	1.0000e-005	0.0000	3.3000e-003
Energy	5.7000e-004	5.1800e-003	4.3500e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	57.2344	57.2344	2.4400e-003	5.9000e-004	57.4700
Mobile	0.6874	3.2776	7.0403	0.0118	0.7684	0.0235	0.7919	0.2073	0.0223	0.2296	0.0000	1,076.2294	1,076.2294	0.0811	0.0000	1,078.2569
Waste						0.0000	0.0000		0.0000	0.0000	23.1877	0.0000	23.1877	1.3704	0.0000	57.4464
Water						0.0000	0.0000		0.0000	0.0000	0.7520	5.2107	5.9627	0.0775	1.8700e-003	8.4577
Total	**0.8451**	**3.2828**	**7.0463**	**0.0118**	**0.7684**	**0.0239**	**0.7923**	**0.2073**	**0.0227**	**0.2300**	**23.9397**	**1,138.6775**	**1,162.6172**	**1.5314**	**2.4600e-003**	**1,201.6343**

	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**	**49.20**	**0.00**	**1.96**	**47.23**	**0.00**	**4.56**

3.0 Construction Detail

Construction Phase

Eureka High School Gym Replacement Project - Humboldt County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/5/2017	6/30/2017	5	20	
2	Site Preparation	Site Preparation	7/1/2017	7/7/2017	5	5	
3	Grading	Grading	7/8/2017	7/19/2017	5	8	
4	Building Construction	Building Construction	7/20/2017	6/6/2018	5	230	
5	Architectural Coating	Architectural Coating	11/28/2017	7/9/2018	5	160	
6	Paving	Paving	6/7/2018	7/2/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 44,910; Non-Residential Outdoor: 14,970; Striped Parking Area: 3,192 (Architectural Coating – sqft)

OffRoad Equipment

Eureka High School Gym Replacement Project - Humboldt County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	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
Demolition	6	15.00	0.00	182.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	35.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

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					0.0197	0.0000	0.0197	2.9900e-003	0.0000	2.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0410	0.4275	0.2301	3.9000e-004		0.0219	0.0219		0.0204	0.0204	0.0000	35.6005	35.6005	9.7300e-003	0.0000	35.8438
Total	**0.0410**	**0.4275**	**0.2301**	**3.9000e-004**	**0.0197**	**0.0219**	**0.0417**	**2.9900e-003**	**0.0204**	**0.0234**	**0.0000**	**35.6005**	**35.6005**	**9.7300e-003**	**0.0000**	**35.8438**

3.2 Demolition - 2017

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	1.4300e-003	0.0372	7.6800e-003	7.0000e-005	1.5000e-003	4.0000e-004	1.8900e-003	4.1000e-004	3.8000e-004	7.9000e-004	0.0000	7.0666	7.0666	2.6000e-004	0.0000	7.0731
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	1.4700e-003	1.4700e-003	0.0120	1.0000e-005	1.1600e-003	1.0000e-005	1.1700e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.1484	1.1484	1.0000e-004	0.0000	1.1510
Total	**2.9000e-003**	**0.0387**	**0.0197**	**8.0000e-005**	**2.6600e-003**	**4.1000e-004**	**3.0600e-003**	**7.2000e-004**	**3.9000e-004**	**1.1100e-003**	**0.0000**	**8.2150**	**8.2150**	**3.6000e-004**	**0.0000**	**8.2241**

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					8.8800e-003	0.0000	8.8800e-003	1.3400e-003	0.0000	1.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0126	0.3266	0.2467	3.9000e-004		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	35.6005	35.6005	9.7300e-003	0.0000	35.8438
Total	**0.0126**	**0.3266**	**0.2467**	**3.9000e-004**	**8.8800e-003**	**9.1400e-003**	**0.0180**	**1.3400e-003**	**9.1400e-003**	**0.0105**	**0.0000**	**35.6005**	**35.6005**	**9.7300e-003**	**0.0000**	**35.8438**

3.2 Demolition - 2017

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	1.4300e-003	0.0372	7.6800e-003	7.0000e-005	1.5000e-003	4.0000e-004	1.8900e-003	4.1000e-004	3.8000e-004	7.9000e-004	0.0000	7.0666	7.0666	2.6000e-004	0.0000	7.0731
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	1.4700e-003	1.4700e-003	0.0120	1.0000e-005	1.1600e-003	1.0000e-005	1.1700e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.1484	1.1484	1.0000e-004	0.0000	1.1510
Total	**2.9000e-003**	**0.0387**	**0.0197**	**8.0000e-005**	**2.6600e-003**	**4.1000e-004**	**3.0600e-003**	**7.2000e-004**	**3.9000e-004**	**1.1100e-003**	**0.0000**	**8.2150**	**8.2150**	**3.6000e-004**	**0.0000**	**8.2241**

3.3 Site Preparation - 2017

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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1307	0.0586	1.0000e-004		7.2000e-003	7.2000e-003		6.6200e-003	6.6200e-003	0.0000	8.8336	8.8336	2.7100e-003	0.0000	8.9013
Total	**0.0124**	**0.1307**	**0.0586**	**1.0000e-004**	**0.0452**	**7.2000e-003**	**0.0524**	**0.0248**	**6.6200e-003**	**0.0315**	**0.0000**	**8.8336**	**8.8336**	**2.7100e-003**	**0.0000**	**8.9013**

3.3 Site Preparation - 2017

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	4.4000e-004	4.4000e-004	3.6000e-003	0.0000	3.5000e-004	0.0000	3.5000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3445	0.3445	3.0000e-005	0.0000	0.3453
Total	**4.4000e-004**	**4.4000e-004**	**3.6000e-003**	**0.0000**	**3.5000e-004**	**0.0000**	**3.5000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3445**	**0.3445**	**3.0000e-005**	**0.0000**	**0.3453**

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					0.0203	0.0000	0.0203	0.0112	0.0000	0.0112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0200e-003	0.0843	0.0574	1.0000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003	0.0000	8.8336	8.8336	2.7100e-003	0.0000	8.9013
Total	**3.0200e-003**	**0.0843**	**0.0574**	**1.0000e-004**	**0.0203**	**2.3700e-003**	**0.0227**	**0.0112**	**2.3700e-003**	**0.0135**	**0.0000**	**8.8336**	**8.8336**	**2.7100e-003**	**0.0000**	**8.9013**

3.3 Site Preparation - 2017

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	4.4000e-004	4.4000e-004	3.6000e-003	0.0000	3.5000e-004	0.0000	3.5000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3445	0.3445	3.0000e-005	0.0000	0.3453
Total	**4.4000e-004**	**4.4000e-004**	**3.6000e-003**	**0.0000**	**3.5000e-004**	**0.0000**	**3.5000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3445**	**0.3445**	**3.0000e-005**	**0.0000**	**0.3453**

3.4 Grading - 2017

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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0123	0.1356	0.0684	1.2000e-004		7.1100e-003	7.1100e-003		6.5400e-003	6.5400e-003	0.0000	11.0238	11.0238	3.3800e-003	0.0000	11.1082
Total	**0.0123**	**0.1356**	**0.0684**	**1.2000e-004**	**0.0262**	**7.1100e-003**	**0.0333**	**0.0135**	**6.5400e-003**	**0.0200**	**0.0000**	**11.0238**	**11.0238**	**3.3800e-003**	**0.0000**	**11.1082**

3.4 Grading - 2017

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	5.9000e-004	5.9000e-004	4.8000e-003	1.0000e-005	4.6000e-004	1.0000e-005	4.7000e-004	1.2000e-004	1.0000e-005	1.3000e-004	0.0000	0.4594	0.4594	4.0000e-005	0.0000	0.4604
Total	**5.9000e-004**	**5.9000e-004**	**4.8000e-003**	**1.0000e-005**	**4.6000e-004**	**1.0000e-005**	**4.7000e-004**	**1.2000e-004**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**0.4594**	**0.4594**	**4.0000e-005**	**0.0000**	**0.4604**

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					0.0118	0.0000	0.0118	6.0600e-003	0.0000	6.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0400e-003	0.1051	0.0760	1.2000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	11.0238	11.0238	3.3800e-003	0.0000	11.1082
Total	**4.0400e-003**	**0.1051**	**0.0760**	**1.2000e-004**	**0.0118**	**3.0900e-003**	**0.0149**	**6.0600e-003**	**3.0900e-003**	**9.1500e-003**	**0.0000**	**11.0238**	**11.0238**	**3.3800e-003**	**0.0000**	**11.1082**

3.4 Grading - 2017

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	5.9000e-004	5.9000e-004	4.8000e-003	1.0000e-005	4.6000e-004	1.0000e-005	4.7000e-004	1.2000e-004	1.0000e-005	1.3000e-004	0.0000	0.4594	0.4594	4.0000e-005	0.0000	0.4604
Total	**5.9000e-004**	**5.9000e-004**	**4.8000e-003**	**1.0000e-005**	**4.6000e-004**	**1.0000e-005**	**4.7000e-004**	**1.2000e-004**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**0.4594**	**0.4594**	**4.0000e-005**	**0.0000**	**0.4604**

3.5 Building Construction - 2017

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	0.1822	1.5534	1.0637	1.5700e-003		0.1046	0.1046		0.0982	0.0982	0.0000	140.6883	140.6883	0.0347	0.0000	141.5549
Total	**0.1822**	**1.5534**	**1.0637**	**1.5700e-003**		**0.1046**	**0.1046**		**0.0982**	**0.0982**	**0.0000**	**140.6883**	**140.6883**	**0.0347**	**0.0000**	**141.5549**

3.5 Building Construction - 2017

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	7.7800e-003	0.1355	0.0479	2.3000e-004	5.2500e-003	1.7300e-003	6.9900e-003	1.5200e-003	1.6600e-003	3.1800e-003	0.0000	21.7650	21.7650	1.3500e-003	0.0000	21.7987
Worker	0.0200	0.0201	0.1639	1.8000e-004	0.0158	1.9000e-004	0.0160	4.2100e-003	1.8000e-004	4.3900e-003	0.0000	15.6752	15.6752	1.4200e-003	0.0000	15.7107
Total	**0.0278**	**0.1556**	**0.2118**	**4.1000e-004**	**0.0210**	**1.9200e-003**	**0.0230**	**5.7300e-003**	**1.8400e-003**	**7.5700e-003**	**0.0000**	**37.4402**	**37.4402**	**2.7700e-003**	**0.0000**	**37.5094**

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	0.0818	1.3345	1.0291	1.5700e-003		0.0581	0.0581		0.0581	0.0581	0.0000	140.6881	140.6881	0.0347	0.0000	141.5547
Total	**0.0818**	**1.3345**	**1.0291**	**1.5700e-003**		**0.0581**	**0.0581**		**0.0581**	**0.0581**	**0.0000**	**140.6881**	**140.6881**	**0.0347**	**0.0000**	**141.5547**

3.5 Building Construction - 2017

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	7.7800e-003	0.1355	0.0479	2.3000e-004	5.2500e-003	1.7300e-003	6.9900e-003	1.5200e-003	1.6600e-003	3.1800e-003	0.0000	21.7650	21.7650	1.3500e-003	0.0000	21.7987
Worker	0.0200	0.0201	0.1639	1.8000e-004	0.0158	1.9000e-004	0.0160	4.2100e-003	1.8000e-004	4.3900e-003	0.0000	15.6752	15.6752	1.4200e-003	0.0000	15.7107
Total	**0.0278**	**0.1556**	**0.2118**	**4.1000e-004**	**0.0210**	**1.9200e-003**	**0.0230**	**5.7300e-003**	**1.8400e-003**	**7.5700e-003**	**0.0000**	**37.4402**	**37.4402**	**2.7700e-003**	**0.0000**	**37.5094**

3.5 Building Construction - 2018

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	0.1514	1.3215	0.9933	1.5200e-003		0.0847	0.0847		0.0797	0.0797	0.0000	134.3385	134.3385	0.0329	0.0000	135.1613
Total	**0.1514**	**1.3215**	**0.9933**	**1.5200e-003**		**0.0847**	**0.0847**		**0.0797**	**0.0797**	**0.0000**	**134.3385**	**134.3385**	**0.0329**	**0.0000**	**135.1613**

3.5 Building Construction - 2018

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	6.6000e-003	0.1240	0.0407	2.2000e-004	5.0700e-003	1.3700e-003	6.4400e-003	1.4700e-003	1.3100e-003	2.7800e-003	0.0000	21.0587	21.0587	1.2200e-003	0.0000	21.0892
Worker	0.0181	0.0176	0.1431	1.7000e-004	0.0153	1.7000e-004	0.0154	4.0600e-003	1.6000e-004	4.2300e-003	0.0000	14.8183	14.8183	1.2500e-003	0.0000	14.8494
Total	**0.0247**	**0.1417**	**0.1838**	**3.9000e-004**	**0.0203**	**1.5400e-003**	**0.0219**	**5.5300e-003**	**1.4700e-003**	**7.0100e-003**	**0.0000**	**35.8770**	**35.8770**	**2.4700e-003**	**0.0000**	**35.9386**

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	0.0754	1.2690	0.9924	1.5200e-003		0.0540	0.0540		0.0540	0.0540	0.0000	134.3383	134.3383	0.0329	0.0000	135.1612
Total	**0.0754**	**1.2690**	**0.9924**	**1.5200e-003**		**0.0540**	**0.0540**		**0.0540**	**0.0540**	**0.0000**	**134.3383**	**134.3383**	**0.0329**	**0.0000**	**135.1612**

3.5 Building Construction - 2018

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	6.6000e-003	0.1240	0.0407	2.2000e-004	5.0700e-003	1.3700e-003	6.4400e-003	1.4700e-003	1.3100e-003	2.7800e-003	0.0000	21.0587	21.0587	1.2200e-003	0.0000	21.0892
Worker	0.0181	0.0176	0.1431	1.7000e-004	0.0153	1.7000e-004	0.0154	4.0600e-003	1.6000e-004	4.2300e-003	0.0000	14.8183	14.8183	1.2500e-003	0.0000	14.8494
Total	**0.0247**	**0.1417**	**0.1838**	**3.9000e-004**	**0.0203**	**1.5400e-003**	**0.0219**	**5.5300e-003**	**1.4700e-003**	**7.0100e-003**	**0.0000**	**35.8770**	**35.8770**	**2.4700e-003**	**0.0000**	**35.9386**

3.6 Architectural Coating - 2017

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	0.0548					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9900e-003	0.0262	0.0224	4.0000e-005		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003	0.0000	3.0639	3.0639	3.2000e-004	0.0000	3.0720
Total	**0.0588**	**0.0262**	**0.0224**	**4.0000e-005**		**2.0800e-003**	**2.0800e-003**		**2.0800e-003**	**2.0800e-003**	**0.0000**	**3.0639**	**3.0639**	**3.2000e-004**	**0.0000**	**3.0720**

3.6 Architectural Coating - 2017

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	8.2000e-004	8.3000e-004	6.7200e-003	1.0000e-005	6.5000e-004	1.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	0.6431	0.6431	6.0000e-005	0.0000	0.6445
Total	**8.2000e-004**	**8.3000e-004**	**6.7200e-003**	**1.0000e-005**	**6.5000e-004**	**1.0000e-005**	**6.6000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**0.6431**	**0.6431**	**6.0000e-005**	**0.0000**	**0.6445**

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	0.0548					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0700e-003	0.0389	0.0410	4.0000e-005		3.2800e-003	3.2800e-003		3.2800e-003	3.2800e-003	0.0000	3.0639	3.0639	3.2000e-004	0.0000	3.0720
Total	**0.0619**	**0.0389**	**0.0410**	**4.0000e-005**		**3.2800e-003**	**3.2800e-003**		**3.2800e-003**	**3.2800e-003**	**0.0000**	**3.0639**	**3.0639**	**3.2000e-004**	**0.0000**	**3.0720**

3.6 Architectural Coating - 2017

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	8.2000e-004	8.3000e-004	6.7200e-003	1.0000e-005	6.5000e-004	1.0000e-005	6.6000e-004	1.7000e-004	1.0000e-005	1.8000e-004	0.0000	0.6431	0.6431	6.0000e-005	0.0000	0.6445
Total	**8.2000e-004**	**8.3000e-004**	**6.7200e-003**	**1.0000e-005**	**6.5000e-004**	**1.0000e-005**	**6.6000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**0.6431**	**0.6431**	**6.0000e-005**	**0.0000**	**0.6445**

3.6 Architectural Coating - 2018

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	0.3106					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0203	0.1364	0.1261	2.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	17.3622	17.3622	1.6500e-003	0.0000	17.4034
Total	**0.3309**	**0.1364**	**0.1261**	**2.0000e-004**		**0.0102**	**0.0102**		**0.0102**	**0.0102**	**0.0000**	**17.3622**	**17.3622**	**1.6500e-003**	**0.0000**	**17.4034**

3.6 Architectural Coating - 2018

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	4.3500e-003	4.2400e-003	0.0345	4.0000e-005	3.6700e-003	4.0000e-005	3.7100e-003	9.8000e-004	4.0000e-005	1.0200e-003	0.0000	3.5669	3.5669	3.0000e-004	0.0000	3.5744
Total	**4.3500e-003**	**4.2400e-003**	**0.0345**	**4.0000e-005**	**3.6700e-003**	**4.0000e-005**	**3.7100e-003**	**9.8000e-004**	**4.0000e-005**	**1.0200e-003**	**0.0000**	**3.5669**	**3.5669**	**3.0000e-004**	**0.0000**	**3.5744**

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	0.3106					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0401	0.2203	0.2324	2.0000e-004		0.0186	0.0186		0.0186	0.0186	0.0000	17.3621	17.3621	1.6500e-003	0.0000	17.4034
Total	**0.3507**	**0.2203**	**0.2324**	**2.0000e-004**		**0.0186**	**0.0186**		**0.0186**	**0.0186**	**0.0000**	**17.3621**	**17.3621**	**1.6500e-003**	**0.0000**	**17.4034**

3.6 Architectural Coating - 2018

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	4.3500e-003	4.2400e-003	0.0345	4.0000e-005	3.6700e-003	4.0000e-005	3.7100e-003	9.8000e-004	4.0000e-005	1.0200e-003	0.0000	3.5669	3.5669	3.0000e-004	0.0000	3.5744
Total	**4.3500e-003**	**4.2400e-003**	**0.0345**	**4.0000e-005**	**3.6700e-003**	**4.0000e-005**	**3.7100e-003**	**9.8000e-004**	**4.0000e-005**	**1.0200e-003**	**0.0000**	**3.5669**	**3.5669**	**3.0000e-004**	**0.0000**	**3.5744**

3.7 Paving - 2018

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	0.0128	0.1307	0.1119	1.7000e-004		7.5300e-003	7.5300e-003		6.9500e-003	6.9500e-003	0.0000	15.2887	15.2887	4.6300e-003	0.0000	15.4045
Paving	1.5700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0144**	**0.1307**	**0.1119**	**1.7000e-004**		**7.5300e-003**	**7.5300e-003**		**6.9500e-003**	**6.9500e-003**	**0.0000**	**15.2887**	**15.2887**	**4.6300e-003**	**0.0000**	**15.4045**

3.7 Paving - 2018

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	1.6500e-003	1.6000e-003	0.0130	2.0000e-005	1.3900e-003	2.0000e-005	1.4000e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.3488	1.3488	1.1000e-004	0.0000	1.3517
Total	**1.6500e-003**	**1.6000e-003**	**0.0130**	**2.0000e-005**	**1.3900e-003**	**2.0000e-005**	**1.4000e-003**	**3.7000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.3488**	**1.3488**	**1.1000e-004**	**0.0000**	**1.3517**

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	6.7700e-003	0.1448	0.1218	1.7000e-004		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	15.2887	15.2887	4.6300e-003	0.0000	15.4045
Paving	1.5700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.3400e-003**	**0.1448**	**0.1218**	**1.7000e-004**		**5.0400e-003**	**5.0400e-003**		**5.0400e-003**	**5.0400e-003**	**0.0000**	**15.2887**	**15.2887**	**4.6300e-003**	**0.0000**	**15.4045**

3.7 Paving - 2018

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	1.6500e-003	1.6000e-003	0.0130	2.0000e-005	1.3900e-003	2.0000e-005	1.4000e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.3488	1.3488	1.1000e-004	0.0000	1.3517
Total	**1.6500e-003**	**1.6000e-003**	**0.0130**	**2.0000e-005**	**1.3900e-003**	**2.0000e-005**	**1.4000e-003**	**3.7000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.3488**	**1.3488**	**1.1000e-004**	**0.0000**	**1.3517**

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	0.6874	3.2776	7.0403	0.0118	0.7684	0.0235	0.7919	0.2073	0.0223	0.2296	0.0000	1,076.2294	1,076.2294	0.0811	0.0000	1,078.2569
Unmitigated	0.6874	3.2776	7.0403	0.0118	0.7684	0.0235	0.7919	0.2073	0.0223	0.2296	0.0000	1,076.2294	1,076.2294	0.0811	0.0000	1,078.2569

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Health Club	1,319.83	836.47	1071.34	2,099,603	2,099,603
Parking Lot	0.00	0.00	0.00		
Total	1,319.83	836.47	1,071.34	2,099,603	2,099,603

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
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Health Club	0.459523	0.056060	0.207286	0.143189	0.053205	0.008548	0.014776	0.043712	0.003050	0.001807	0.006178	0.001540	0.001126
Parking Lot	0.459523	0.056060	0.207286	0.143189	0.053205	0.008548	0.014776	0.043712	0.003050	0.001807	0.006178	0.001540	0.001126

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	51.5944	51.5944	2.3300e-003	4.8000e-004	51.7966
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	51.5944	51.5944	2.3300e-003	4.8000e-004	51.7966
NaturalGas Mitigated	5.7000e-004	5.1800e-003	4.3500e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.6399	5.6399	1.1000e-004	1.0000e-004	5.6734
NaturalGas Unmitigated	5.7000e-004	5.1800e-003	4.3500e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.6399	5.6399	1.1000e-004	1.0000e-004	5.6734

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					
Health Club	105688	5.7000e-004	5.1800e-003	4.3500e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.6399	5.6399	1.1000e-004	1.0000e-004	5.6734
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
Total		**5.7000e-004**	**5.1800e-003**	**4.3500e-003**	**3.0000e-005**		**3.9000e-004**	**3.9000e-004**		**3.9000e-004**	**3.9000e-004**	**0.0000**	**5.6399**	**5.6399**	**1.1000e-004**	**1.0000e-004**	**5.6734**

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					
Health Club	105688	5.7000e-004	5.1800e-003	4.3500e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004	0.0000	5.6399	5.6399	1.1000e-004	1.0000e-004	5.6734
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
Total		**5.7000e-004**	**5.1800e-003**	**4.3500e-003**	**3.0000e-005**		**3.9000e-004**	**3.9000e-004**		**3.9000e-004**	**3.9000e-004**	**0.0000**	**5.6399**	**5.6399**	**1.1000e-004**	**1.0000e-004**	**5.6734**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	130538	37.9751	1.7200e-003	3.6000e-004	38.1239
Parking Lot	46816	13.6193	6.2000e-004	1.3000e-004	13.6727
Total		**51.5944**	**2.3400e-003**	**4.9000e-004**	**51.7966**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Health Club	130538	37.9751	1.7200e-003	3.6000e-004	38.1239
Parking Lot	46816	13.6193	6.2000e-004	1.3000e-004	13.6727
Total		**51.5944**	**2.3400e-003**	**4.9000e-004**	**51.7966**

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	0.1571	1.0000e-005	1.6100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0900e-003	3.0900e-003	1.0000e-005	0.0000	3.3000e-003
Unmitigated	0.1571	1.0000e-005	1.6100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0900e-003	3.0900e-003	1.0000e-005	0.0000	3.3000e-003

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	0.0365					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1204					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5000e-004	1.0000e-005	1.6100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0900e-003	3.0900e-003	1.0000e-005	0.0000	3.3000e-003
Total	**0.1571**	**1.0000e-005**	**1.6100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.0900e-003**	**3.0900e-003**	**1.0000e-005**	**0.0000**	**3.3000e-003**

6.2 Area by SubCategory

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	0.0365					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1204					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5000e-004	1.0000e-005	1.6100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0900e-003	3.0900e-003	1.0000e-005	0.0000	3.3000e-003
Total	**0.1571**	**1.0000e-005**	**1.6100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.0900e-003**	**3.0900e-003**	**1.0000e-005**	**0.0000**	**3.3000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.9627	0.0775	1.8700e-003	8.4577
Unmitigated	5.9627	0.0775	1.8700e-003	8.4577

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	2.37046 / 1.45286	5.9627	0.0775	1.8700e-003	8.4577
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.9627**	**0.0775**	**1.8700e-003**	**8.4577**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Health Club	2.37046 / 1.45286	5.9627	0.0775	1.8700e-003	8.4577
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.9627**	**0.0775**	**1.8700e-003**	**8.4577**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	23.1877	1.3704	0.0000	57.4464
Unmitigated	46.3753	2.7407	0.0000	114.8929

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	228.46	46.3753	2.7407	0.0000	114.8929
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**46.3753**	**2.7407**	**0.0000**	**114.8929**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Health Club	114.23	23.1877	1.3704	0.0000	57.4464
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**23.1877**	**1.3704**	**0.0000**	**57.4464**

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

Eureka High School Gym Replacement Project

Humboldt 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												
Architectural Coating	-0.06	-0.58	-0.66	0.00	-0.77	-0.77	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.46	0.09	0.01	0.00	0.40	0.36	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.65	0.22	-0.07	0.00	0.57	0.54	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.64	0.22	-0.10	0.00	0.56	0.53	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.38	-0.11	-0.08	0.00	0.33	0.27	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.73	0.35	0.02	0.00	0.67	0.64	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
Air Compressors	Diesel	Tier 1	1	1	No Change	0.00
Cement and Mortar Mixers	Diesel	Tier 2	2	2	No Change	0.00
Concrete/Industrial Saws	Diesel	Tier 2	1	1	No Change	0.00
Cranes	Diesel	Tier 2	1	1	No Change	0.00
Forklifts	Diesel	Tier 2	3	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Graders	Diesel	Tier 2	1	1	No Change	0.00
Pavers	Diesel	Tier 2	1	1	No Change	0.00
Paving Equipment	Diesel	Tier 2	2	2	No Change	0.00
Rollers	Diesel	Tier 2	2	2	No Change	0.00
Rubber Tired Dozers	Diesel	Tier 2	6	6	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	Tier 2	11	11	No Change	0.00
Welders	Diesel	Tier 2	1	1	No Change	0.00
Excavators	Diesel	Tier 2	4	4	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					
Air Compressors	2.42900E-002	1.62610E-001	1.48500E-001	2.40000E-004	1.23200E-002	1.23200E-002	0.00000E+000	2.04261E+001	2.04261E+001	1.97000E-003	0.00000E+000	2.04754E+001
Cement and Mortar Mixers	7.90000E-004	4.97000E-003	4.16000E-003	1.00000E-005	2.00000E-004	2.00000E-004	0.00000E+000	6.18670E-001	6.18670E-001	6.00000E-005	0.00000E+000	6.20280E-001
Concrete/Industrial Saws	5.81000E-003	4.26100E-002	3.74900E-002	6.00000E-005	3.07000E-003	3.07000E-003	0.00000E+000	5.37656E+000	5.37656E+000	4.70000E-004	0.00000E+000	5.38839E+000
Cranes	6.21200E-002	7.39700E-001	2.68890E-001	5.80000E-004	3.25400E-002	2.99400E-002	0.00000E+000	5.34372E+001	5.34372E+001	1.65000E-002	0.00000E+000	5.38497E+001
Excavators	1.20100E-002	1.33200E-001	1.13440E-001	1.80000E-004	6.55000E-003	6.03000E-003	0.00000E+000	1.62826E+001	1.62826E+001	4.99000E-003	0.00000E+000	1.64073E+001
Forklifts	6.72100E-002	5.87410E-001	4.24520E-001	5.30000E-004	4.77400E-002	4.39200E-002	0.00000E+000	4.85251E+001	4.85251E+001	1.49800E-002	0.00000E+000	4.88997E+001
Generator Sets	6.19100E-002	4.93560E-001	4.32470E-001	7.60000E-004	3.23800E-002	3.23800E-002	0.00000E+000	6.49989E+001	6.49989E+001	4.98000E-003	0.00000E+000	6.51234E+001
Graders	2.14000E-003	2.98800E-002	7.84000E-003	3.00000E-005	9.70000E-004	9.00000E-004	0.00000E+000	2.47210E+000	2.47210E+000	7.60000E-004	0.00000E+000	2.49103E+000
Pavers	2.94000E-003	3.24800E-002	2.63400E-002	4.00000E-005	1.59000E-003	1.46000E-003	0.00000E+000	3.86297E+000	3.86297E+000	1.20000E-003	0.00000E+000	3.89304E+000
Paving Equipment	3.21000E-003	3.58900E-002	3.42400E-002	6.00000E-005	1.76000E-003	1.62000E-003	0.00000E+000	5.02133E+000	5.02133E+000	1.56000E-003	0.00000E+000	5.06041E+000
Rollers	3.48000E-003	3.36600E-002	2.61300E-002	4.00000E-005	2.32000E-003	2.13000E-003	0.00000E+000	3.23206E+000	3.23206E+000	1.01000E-003	0.00000E+000	3.25721E+000
Rubber Tired Dozers	3.87800E-002	4.21050E-001	1.45740E-001	2.70000E-004	2.06100E-002	1.89600E-002	0.00000E+000	2.49747E+001	2.49747E+001	7.65000E-003	0.00000E+000	2.51660E+001
Tractors/Loaders/Backhoes	9.74800E-002	9.48080E-001	7.87860E-001	1.03000E-003	6.95000E-002	6.39400E-002	0.00000E+000	9.53260E+001	9.53260E+001	2.94300E-002	0.00000E+000	9.60617E+001
Welders	5.42600E-002	1.96860E-001	2.16930E-001	2.90000E-004	1.38900E-002	1.38900E-002	0.00000E+000	2.16454E+001	2.16454E+001	4.42000E-003	0.00000E+000	2.17559E+001

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					
Air Compressors	4.71500E-002	2.59110E-001	2.73380E-001	2.40000E-004	2.18700E-002	2.18700E-002	0.00000E+000	2.04260E+001	2.04260E+001	1.97000E-003	0.00000E+000	2.04754E+001
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	1.00000E-005	0.00000E+000	0.00000E+000	0.00000E+000	6.18670E-001	6.18670E-001	6.00000E-005	0.00000E+000	6.20280E-001
Concrete/Industrial Saws	2.40000E-003	4.95400E-002	3.85900E-002	6.00000E-005	2.00000E-003	2.00000E-003	0.00000E+000	5.37656E+000	5.37656E+000	4.70000E-004	0.00000E+000	5.38838E+000
Cranes	1.42700E-002	4.93390E-001	3.09110E-001	5.80000E-004	1.04600E-002	1.04600E-002	0.00000E+000	5.34371E+001	5.34371E+001	1.65000E-002	0.00000E+000	5.38496E+001
Excavators	6.84000E-003	1.50130E-001	1.33210E-001	1.80000E-004	4.61000E-003	4.61000E-003	0.00000E+000	1.62826E+001	1.62826E+001	4.99000E-003	0.00000E+000	1.64073E+001
Forklifts	2.49100E-002	5.14470E-001	4.00740E-001	5.30000E-004	2.08000E-002	2.08000E-002	0.00000E+000	4.85250E+001	4.85250E+001	1.49800E-002	0.00000E+000	4.88996E+001
Generator Sets	6.19000E-002	4.93560E-001	4.32470E-001	7.60000E-004	3.23800E-002	3.23800E-002	0.00000E+000	6.49988E+001	6.49988E+001	4.98000E-003	0.00000E+000	6.51233E+001
Graders	6.50000E-004	2.24500E-002	1.40600E-002	3.00000E-005	4.80000E-004	4.80000E-004	0.00000E+000	2.47209E+000	2.47209E+000	7.60000E-004	0.00000E+000	2.49103E+000
Pavers	1.65000E-003	3.61400E-002	3.20700E-002	4.00000E-005	1.11000E-003	1.11000E-003	0.00000E+000	3.86297E+000	3.86297E+000	1.20000E-003	0.00000E+000	3.89303E+000
Paving Equipment	2.15000E-003	4.71800E-002	4.18600E-002	6.00000E-005	1.45000E-003	1.45000E-003	0.00000E+000	5.02132E+000	5.02132E+000	1.56000E-003	0.00000E+000	5.06040E+000
Rollers	1.66000E-003	3.43800E-002	2.67800E-002	4.00000E-005	1.39000E-003	1.39000E-003	0.00000E+000	3.23206E+000	3.23206E+000	1.01000E-003	0.00000E+000	3.25721E+000
Rubber Tired Dozers	6.59000E-003	2.27790E-001	1.42710E-001	2.70000E-004	4.83000E-003	4.83000E-003	0.00000E+000	2.49746E+001	2.49746E+001	7.65000E-003	0.00000E+000	2.51659E+001
Tractors/Loaders/Backhoes	4.84600E-002	1.00086E+000	7.79610E-001	1.03000E-003	4.04600E-002	4.04600E-002	0.00000E+000	9.53259E+001	9.53259E+001	2.94300E-002	0.00000E+000	9.60616E+001
Welders	1.21800E-002	1.94390E-001	1.72140E-001	2.90000E-004	1.17600E-002	1.17600E-002	0.00000E+000	2.16454E+001	2.16454E+001	4.42000E-003	0.00000E+000	2.17559E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	-9.41128E-001	-5.93444E-001	-8.40943E-001	0.00000E+000	-7.75162E-001	-7.75162E-001	0.00000E+000	9.79141E-007	9.79141E-007	0.00000E+000	0.00000E+000	9.76782E-007
Cement and Mortar Mixers	1.00000E+000	1.00000E+000	1.00000E+000	0.00000E+000	1.00000E+000	1.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	5.86919E-001	-1.62638E-001	-2.93412E-002	0.00000E+000	3.48534E-001	3.48534E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.85584E-006
Cranes	7.70283E-001	3.32986E-001	-1.49578E-001	0.00000E+000	6.78549E-001	6.50635E-001	0.00000E+000	1.30995E-006	1.30995E-006	0.00000E+000	0.00000E+000	1.11421E-006
Excavators	4.30475E-001	-1.27102E-001	-1.74277E-001	0.00000E+000	2.96183E-001	2.35489E-001	0.00000E+000	1.22830E-006	1.22830E-006	0.00000E+000	0.00000E+000	1.21897E-006
Forklifts	6.29371E-001	1.24172E-001	5.60162E-002	0.00000E+000	5.64307E-001	5.26412E-001	0.00000E+000	1.23647E-006	1.23647E-006	0.00000E+000	0.00000E+000	1.22700E-006
Generator Sets	1.61525E-004	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23079E-006	1.23079E-006	0.00000E+000	0.00000E+000	1.07488E-006
Graders	6.96262E-001	2.48661E-001	-7.93367E-001	0.00000E+000	5.05155E-001	4.66667E-001	0.00000E+000	4.04514E-006	4.04514E-006	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	4.38776E-001	-1.12685E-001	-2.17540E-001	0.00000E+000	3.01887E-001	2.39726E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	2.56869E-006
Paving Equipment	3.30218E-001	-3.14572E-001	-2.22547E-001	0.00000E+000	1.76136E-001	1.04938E-001	0.00000E+000	1.99150E-006	1.99150E-006	0.00000E+000	0.00000E+000	1.97612E-006
Rollers	5.22989E-001	-2.13904E-002	-2.48756E-002	0.00000E+000	4.00862E-001	3.47418E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	8.30067E-001	4.58995E-001	2.07904E-002	0.00000E+000	7.65648E-001	7.45253E-001	0.00000E+000	1.20122E-006	1.20122E-006	0.00000E+000	0.00000E+000	1.19209E-006
Tractors/Loaders/Backhoes	5.02872E-001	-5.56704E-002	1.04714E-002	0.00000E+000	4.17842E-001	3.67219E-001	0.00000E+000	1.25884E-006	1.25884E-006	0.00000E+000	0.00000E+000	1.14510E-006
Welders	7.75525E-001	1.25470E-002	2.06472E-001	0.00000E+000	1.53348E-001	1.53348E-001	0.00000E+000	9.23985E-007	9.23985E-007	0.00000E+000	0.00000E+000	9.19289E-007

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)	0.00		
Yes	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.04	0.01	0.04	0.01	0.00	0.00
Demolition	Fugitive Dust	0.02	0.00	0.01	0.00	0.55	0.55
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.03	0.01	0.01	0.01	0.55	0.55
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.05	0.02	0.02	0.01	0.55	0.55
Site Preparation	Roads	0.00	0.00	0.00	0.00	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	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
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.11	0.33		
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)	250.00
No	Use Low VOC Paint (Residential Exterior)	250.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	Use Low VOC Paint (Parking)	250.00
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		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value

Institute Recycling and Composting Services Percent Reduction in Waste Disposed	50.00

Appendix B

Construction Noise and Vibration Analyses

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION Jay Willard Gymnasium Replacement Project

Scenario: Demolition
Receptor Locations: School Building- 40 feet, Nearest Residence-90 feet

Noise Source- At School Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA
Concrete Saw	90	1	1	0.2	40	85
Dozer	82	1	1	0.4	40	80
Backhoe	78	3	1	0.4	40	81

Noise Source- At Residential Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA
Concrete Saw	90	1	1	0.2	90	78
Dozer	82	1	1	0.4	90	73
Backhoe	78	3	1	0.4	90	74

TOTAL Leq DURING NORMAL OPERATIONS:

At School Receptor	**87**	**dBA**	At Residentia	**80**	**dBA**
Daytime Ambient without Equipment Operatic	50	dBA		50	dBA
Nighttime Ambient without Equipment Opera	45	dBA		45	dBA
Daytime Hours Operating:	8			8	
Evening Hours Operating:	0			0	
Nighttime Hours Operating:	0			0	
Combined Daytime Hourly Leq-School Recep	87	*dBA*		80	*dBA*
Combined Daytime Hourly Leq-Residential R	80			50	
Combined Nighttime Hourly Leq:	45	*dBA*		45	*dBA*
ESTIMATED Ldn:	***82***	***dBA***		***75***	***dBA***

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.
* Equipment type per CalEEMod supplied information

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION Jay Willard Gymnasium Replacement Project

Scenario: Site Prep and Grading
Receptor Locations: School Building- 80 feet, Nearest Residential Building-110 feet

Noise Source- At School Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA
Graders*	85	1	1	0.4	80	77
Dozer	82	1	0.875	0.4	80	73
Backhoe	78	1	1	0.4	80	70

Noise Source- At Residential Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA
Graders*	85	1	1	0.4	110	74
Dozer	82	1	0.875	0.4	110	71
Backhoe	78	1	1	0.4	110	67

TOTAL Leq DURING NORMAL OPERATIONS:

At School Receptor	**79**	**dBA**	At Residentia	**76**	**dBA**
Daytime Ambient without Equipment Operati	50	dBA		50	dBA
Nighttime Ambient without Equipment Opera	45	dBA		45	dBA
Daytime Hours Operating:	8			8	
Evening Hours Operating:	0			0	
Nighttime Hours Operating:	0			0	
Combined Daytime Hourly Leq:	50	*dBA*		50	*dBA*
Combined Nighttime Hourly Leq:	45	*dBA*		45	*dBA*
ESTIMATED Ldn:	***74***	***dBA***		***72***	***dBA***

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.
* Equipment type per CalEEMod supplied information
* Actual Measured Lmax not available, so used Spec Lmax

Equipment Use and Noise Level Source:

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION Jay Willard Gymnasium Replacement Project

Scenario: Building Construction
Receptor Locations: School Building- 80 feet, Nearest Residential Building-110 feet

Noise Source- At School Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA
Cranes	81	1	0.75	0.16	80	68
Forklifts	75	1	0.75	0.2	80	63
Generators	81	1	1	0.5	80	74
Backhoe	78	1	0.75	0.4	80	69
Welder	74	3	1	0.4	80	71

Noise Source- At Residential Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA
Cranes [3]	81	1	0.75	0.16	110	65
Forklifts	75	1	0.75	0.2	110	60
Generators [3]	81	1	1	0.5	110	71
Backhoe [3]	78	1	0.75	0.4	110	66
Welder [3]	74	3	1	0.4	110	68

TOTAL Leq DURING NORMAL OPERATIONS:

At School Receptor	**77**	**dBA**	At Residentia	**74**	**dBA**
Daytime Ambient without Equipment Operati	50	dBA		50	dBA
Nighttime Ambient without Equipment Opera	45	dBA		45	dBA
Daytime Hours Operating:	8			8	
Evening Hours Operating:	0			0	
Nighttime Hours Operating:	0			0	
Combined Daytime Hourly Leq:	77	*dBA*		74	*dBA*
Combined Nighttime Hourly Leq:	45	*dBA*		45	*dBA*
ESTIMATED Ldn:	***72***	***dBA***		***70***	***dBA***

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.
* Equipment type per CalEEMod supplied information

Equipment Use Source:

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION Jay Willard Gymnasium Replacement Project

Scenario: Architectural Coating
Receptor Locations: School Building- 80 feet, Nearest Residential Building-110 feet

Noise Source- At School Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA
Air Compressor	78	1	0.75	0.4	80	69

Noise Source- At Residential Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor *	Distance, Ft.	Leq, dBA
Air Compressor	78	1	0.75	0.4	110	66

TOTAL Leq DURING NORMAL OPERATIONS:

At School Receptor	**69**	**dBA**	At Residentia	**66**	**dBA**
Daytime Ambient without Equipment Operati	50	dBA		50	dBA
Nighttime Ambient without Equipment Opera	45	dBA		45	dBA
Daytime Hours Operating:	8			8	
Evening Hours Operating:	0			0	
Nighttime Hours Operating:	0			0	
Combined Daytime Hourly Leq:	69	*dBA*		66	*dBA*
Combined Nighttime Hourly Leq:	45	*dBA*		45	*dBA*
ESTIMATED Ldn:	***64***	***dBA***		***62***	***dBA***

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.
* Equipment type per CalEEMod supplied information

Equipment Use Source:

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION Jay Willard Gymnasium Replacement Project

Scenario: Building Construction
Receptor Locations: School Building- 80 feet, Nearest Residential Building-110 feet

Noise Source- At School Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor	Distance, Ft.	Leq, dBA
Cement Mixers	79	1	0.75	0.4	80	70
Pavers	77	1	0.75	0.5	80	69
Paving Equipment*	90	1	1	0.2	80	79
Rollers	80	1	0.75	0.4	80	71
Backhoe	78	1	1	0.4	80	70

Noise Source- At Residential Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use	Effective Use Factor	Distance, Ft.	Leq, dBA
Cement Mixers	79	1	0.75	0.4	110	67
Pavers	77	1	0.75	0.5	110	66
Paving Equipment*	90	1	1	0.2	110	76
Rollers	80	1	0.75	0.4	110	68
Backhoe	78	1	1	0.4	110	67

TOTAL Leq DURING NORMAL OPERATIONS:

At School Receptor	**81**	**dBA**	At Residentia	**78**	**dBA**
Daytime Ambient without Equipment Operati	50	dBA		50	dBA
Nighttime Ambient without Equipment Opera	45	dBA		45	dBA
Daytime Hours Operating:	8			8	
Evening Hours Operating:	0			0	
Nighttime Hours Operating:	0			0	
Combined Daytime Hourly Leq:	81	*dBA*		78	*dBA*
Combined Nighttime Hourly Leq:	45	*dBA*		45	*dBA*
ESTIMATED Ldn:	***76***	***dBA***		***73***	***dBA***

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level.
* Assumed Paving Equipment to be Pavement Scarifier
* Equipment type per CalEEMod supplied information

Equipment Use Source:

HEAVY EQUIPMENT NOISE IMPACT ESTIMATION Jay Willard Gymnasium Replacement Project

Scenario: Demolition during summer school at a distance of 150 feet
(Applicable for mitigation measures N-2 and N-4)
feet

Noise Source- At School Receptor	Ave. Maximum SPL @ 50 ft., dBA	Number	Percentage of Workday Hours In Use*	Effective Use Factor *	Distance, Ft.	Leq, dBA
Concrete Saw	90	1	1	0.2	150	73
Dozer	82	1	1	0.4	150	68
Backhoe	78	3	1	0.4	150	69

TOTAL Leq DURING NORMAL OPERATIONS:

At School Receptor	**76**	**dBA**
Daytime Ambient without Equipment Operati	50	dBA
Nighttime Ambient without Equipment Opera	45	dBA
Daytime Hours Operating:	8	
Evening Hours Operating:	0	
Nighttime Hours Operating:	0	
Combined Daytime Hourly Leq-School Recep	76	*dBA*
Combined Daytime Hourly Leq-Residential R	50	
Combined Nighttime Hourly Leq:	45	*dBA*
ESTIMATED Ldn:	***71***	***dBA***

Distance attenuation assumed at: 6 dBA per doubling of distance

Notes: #N/A = Not Applicable

* Assumed percentage of time that equipment is operating at near maximum sound level. Equipment type per CalEEMod supplied information

Equipment Use and Noise Level Source:

Federal Highway Administration (FHWA) (2006), *Construction Noise Handbook. Accessed at https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/*

Vibration Analysis-Demolition

PPV (in/sec) = PPV {ref} * (25/D)^1.5

Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Demolition Site

Equipment = Large Dozer

PPV{ref} =	0.089	in/sec	0.089	in/sec	
D =	40	feet	90	feet	
PPV at receptor =	***0.044***	***in/sec***	***0.013***	***in/sec***	
PPV is 1.7x to 6x larger than RMS velocity					
Assume typical conversion factor of	4	PPV:RMS	4	PPV:RMS	
	School Building		School Building		
Therefore estimated RMS velocity =	***0.011***	***in/sec***	***Therefore estimated RMS velocity =***	***0.003***	***in/sec***
School Receptor Lv =	***81***	***VdB***	***Residential Receptor Lv =***	***70***	***VdB***

Equipment = Loaded truck

PPV{ref} =	0.076	in/sec	0.076	in/sec	
D =	40	feet	90	feet	
PPV at receptor =	***0.038***	***in/sec***	***0.011***	***in/sec***	
PPV is 1.7x to 6x larger than RMS velocity					
Assume typical conversion factor of	4	PPV:RMS	4	PPV:RMS	
	School Building		School Building		
Therefore estimated RMS velocity =	***0.009***	***in/sec***	***Therefore estimated RMS velocity =***	***0.003***	***in/sec***
School Receptor Lv =	***79***	***VdB***	***Residential Receptor Lv =***	***69***	***VdB***

Source: Chapter 12 Noise and Vibration During Construction in
Transit Noise and Vibration Assessment, April 1995
Harris Miller Miller & Hanson, Inc.
Prepared For: USDOT Federal Transit Administration

* RMS Velocity in decibels VdB with Vref of 1E-6 in/sec and PPV:RMS of ~4

Criterion

US Bureau of Mines, 1971	
PPV, in/sec	Degree of Damage
<2	Safe
2 - 4	Plaster Cracking
4 - 7	Minor Damage
>7	Major Damage

Canmet, Bauer, and Calder, 1977		
Equipment	PPV Threshold, in/sec	Type of Damage
Rigid Mercury Switches	0.5	Trip Out
House	2	Cracked Plaster
Concrete Block	8	Crack in Block
Cased Drill Holes	15	Horizontol Offset
Pumps, Compressors	40	Shaft Misalignment

Human Response Criteria

Level, Lv in VdB	Equivalent Noise Level, dBA		Human Response
	Low freq (30Hz)	Hi Freq (60 Hz)	
65	25	40	Approximate threshold of perception, low-freq inaudible, but mid-freq excessive for sleeping
75	35	50	Approx. dividing line between barely perceptible and clearly perceptible. Annoying vibration for most people. Low-freq acceptable for sleeping areas.
85	45	60	Vibration acceptable only if no more than 2 events/day for residential uses. Low-freq annoying in sleeping areas; mid-freq unacceptable for sensitive uses, including schools and churches.
90	50	65	Difficulty with tasks such as reading computer screens. Generally annoying for commercial uses.

Impact Criteria

Land Use	Lv in VdB		
	Frequent Events (70+/day)	Occasional Events (30-70)	Infrequent (<30 events/day)
Category 1: Vibration	65	65	65
Concert Halls	65	65	65
TV Studios	65	65	65
Recording Studios	65	65	65
Category 2: Residences, hotels, sleeping areas	72	75	80
Auditoriums	72	80	80
Theaters	72	80	80
Category 3: Institutional with primarily daytime use only	75	78	83

Vibration Analysis-Construction

PPV (in/sec) = PPV {ref} * (25/D)^1.5

Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Equipment = Large Dozer

PPV{ref} =	0.089	in/sec	0.089	in/sec	
D =	92	feet	150	feet	
PPV at receptor =	***0.013***	***in/sec***	***0.006***	***in/sec***	
PPV is 1.7x to 6x larger than RMS velocity					
Assume typical conversion factor of	4	PPV:RMS	4	PPV:RMS	
	School Building		School Building		
Therefore estimated RMS velocity =	***0.003***	***in/sec***	***refore estimated RMS velocity =***	***0.002***	***in/sec***
School Receptor Lv =	***70***	***VdB***	***Residential Receptor Lv =***	***64***	***VdB***

Equipment = Loaded truck

PPV{ref} =	0.076	in/sec	0.076	in/sec	
D =	92	feet	150	feet	
PPV at receptor =	***0.011***	***in/sec***	***0.005***	***in/sec***	
PPV is 1.7x to 6x larger than RMS velocity					
Assume typical conversion factor of	4	PPV:RMS	4	PPV:RMS	
	School Building		School Building		
Therefore estimated RMS velocity =	***0.003***	***in/sec***	***refore estimated RMS velocity =***	***0.001***	***in/sec***
School Receptor Lv =	***69***	***VdB***	***Residential Receptor Lv =***	***62***	***VdB***

Source: Chapter 12 Noise and Vibration During Construction in
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