

**RECIRCULATED PORTIONS OF THE DRAFT  
ENVIRONMENTAL IMPACT REPORT FOR THE  
RIVER CROSSING MARKETPLACE SPECIFIC PLAN**

**SCH No. 2017052030**

Lead Agency:

**CITY OF REDDING**

777 Cypress Avenue

Redding, CA 96001

Assisted by:

**PLACEWORKS**

101 Parkshore Drive, Suite 215

Folsom CA 95630

April 2019



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# **Notice of Availability of Recirculated Portions of the River Crossing Marketplace Specific Plan EIR**

**DATE:** March 29, 2019  
**TO:** Agencies, Organizations, and Interested Parties  
**FROM:** City of Redding  
**SUBJECT:** Notice of Availability of Recirculated Portions of the Draft Environmental Impact Report (EIR) for the River Crossing Marketplace Specific Plan EIR

**NOTICE IS HEREBY GIVEN:** Pursuant to Public Resources Code §§ 21091, 21092, and 21092.1, and California Environmental Quality Act (CEQA) State Guidelines §§ 15087, 15088.5, and 15105, notice is hereby given that portions of the Draft EIR for the River Crossing Marketplace Specific Plan EIR (State Clearinghouse No. 2017052030) are being recirculated for public comment from April 1 to May 30, 2019.

**PROJECT TITLE:** River Crossing Marketplace Specific Plan

**PROJECT LOCATION:** The Project site is on the northeast corner of South Bonnyview Road and Bechelli Lane in the City of Redding. Comprised of four Shasta County Assessor's parcel numbers (070-160-044, 070-170-025, 070-170-023, and 070-320-004, the project site is approximately 24.8 acres in size. The Project site is bounded by South Bonnyview Road to the south, Bechelli Lane to the west, a stormwater detention basin and a conservation easement and vacant land to the north, and Interstate 5 (I-5) to the east.

**PROJECT DESCRIPTION:** The Project applicant is requesting adoption of the River Crossing Marketplace Specific Plan (Specific Plan), which would result in construction of approximately 222,000 square feet of retail uses consisting of a discount warehouse store (approximately 152,000 plus equipment rooms) with up to 15 fuel pumps (30 fuel dispensers) and retail pads accommodating up to 70,000 square feet of retail, restaurants (some with drive-through lanes), and service uses. The Specific Plan would include a sign package for a freeway-oriented pylon sign and other signage. To accommodate the proposed Project, the general plan land use designation would be amended from Shopping Center and Residential 6 to 10 units per acre to "Regional Commercial," and the zoning would be amended from "SC", Shopping Center District and "RM-10" Residential Multiple Family District to Regional Commercial District with the "SP" Specific Plan Overlay District.

**ENVIRONMENTAL DETERMINATION:** The City of Redding, as Lead Agency, previously circulated a Draft EIR for public review from April 13, 2018, through June 12, 2018. The Draft EIR analyzed project impacts on environmental topical areas: Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Public Services, Transportation and Traffic, Tribal Cultural Resources, and Utilities and Service Systems. The Draft EIR analysis determined the proposed project would have significant and unavoidable air quality and traffic impacts. The air quality impacts are regional in nature and no feasible mitigation was identified. Mitigation measures are included for the traffic impacts, however some of the improvements are outside of the City's jurisdiction or have uncertain funding sources and are beyond the responsibility of this project to complete.

The City received comments that the appendices to the Draft EIR involving the Health Risk Assessment and the Traffic Impact Assessment Report (TIAR) were either not included or were incomplete. The City has included this information in the recirculated Draft EIR. In addition, the City has revised the Air Quality and Greenhouse Gases sections to the Draft EIR to include additional information and reflect the most current case law.

The following documents are part of the recirculation:

### **Section 4.2 Air Quality**

Section 4.2, Air Quality, of the Draft EIR has been revised to consider emissions that will be generated by the construction of certain offsite traffic improvements that will occur at the same time as project construction. Mitigation Measure AQ-1 was modified to require use of Tier 3 and Tier 4 construction equipment to reduce potential impacts from construction emissions. A strike out, underlined version of this section is included to show the revisions.

### **Section 4.6 Greenhouse Gases**

Section 4.6, Greenhouse Gases, of the Draft EIR has been revised to consider the effect of recent court decisions on the appropriate threshold of significance for greenhouse gasses. In addition, the revised section addresses greenhouse gas emissions that will be generated by the construction of certain offsite traffic improvements that will occur at the same time as project construction. A strike out, underlined version of this section is included to show the revisions.

### **Appendix 4.2-2 Health Risk Assessment**

The River Crossing Marketplace Specific Plan Health Risk Assessment was completed in August 2017 and used to prepare the analysis included as Impact AQ-6 beginning on page 4.2-18 of the Draft EIR. The appendix is referenced in the analysis but was not included on the CD or the City website during the public comment period. No changes have been made to the Health Risk Assessment as a result of this recirculation, however, construction impacts were analyzed and included in the Draft EIR. An independent peer review of the Health Risk Assessment was conducted by the consulting firm Ramboll, and is included in Appendix 4.2.-2. While the peer review confirmed the conclusions of the Health Risk Assessment, additional analyses were included to present the decision makers and public with the most complete information.

### **Appendix 4.12-1 Traffic Impact Analysis**

The River Crossing Marketplace Specific Plan Traffic Impact Analysis Report (TIAR) was included in the Draft EIR, however a non-final draft, pre-production date of April 2018, was included rather than the final TIAR dated November 2018. Additionally, Appendix F to the TIAR titled “Final Traffic Volume Forecasts” for the Bonnyview Interchange Project Study Report (PSR) -which includes a traffic volume forecasts memorandum and the Traffic Operations Report for the PSR - was not part of the document on the CD or the City website. The final November version of the TIAR was used to draft the impact analysis included in the Draft EIR, so no changes to the Draft EIR are necessary as a result of this recirculation.

The Recirculated Draft EIR has been prepared in compliance with CEQA Guidelines Section 15088.5. This document does not revise the EIR in any other respect than noted above, and the other portions of the EIR are not being recirculated for public review and comment.

### ***Review and Comment***

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In accordance with CEQA Guidelines § 15088.5(f)(2), the City requests that agencies and interested parties limit their comments to the modified portions of the Draft EIR only. Consistent with § 15088.5(f)(2), the City need only respond to (1) comments received during the initial circulation period that relate to chapters or portions of the document that were not revised and recirculated, and (2) comments received during the

recirculation period that relate to the chapters or portions of the earlier EIR that were revised and recirculated.

**DOCUMENT AVAILABILITY:** Pursuant to CEQA Guidelines § 15087, responsible and trustee agencies and other interested parties, including members of the public, must submit any comments in response to this notice no later than **Thursday, May 30, 2019**. The recirculated portions of the Draft EIR are available for review at the following locations in addition to the City website (<https://www.cityofredding.org>):

- **Redding City Hall** located at 777 Cypress Avenue, Redding, CA 96001
- **Redding Library** located at 1100 Parkview Avenue, Redding, CA 96001

The Notice of Preparation, Notice of Availability, Draft EIR, and all appendices, are available online at <https://www.cityofredding.org>.

**COMMENTS:** Written comments should be submitted to:

**Kent Manuel, Planning Manager (Special Projects)**  
City of Redding  
Development Services Department  
777 Cypress Avenue, Redding, CA 96001  
Email: [kmanuel@ci.redding.ca.us](mailto:kmanuel@ci.redding.ca.us)





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# Summary of Revisions

Pursuant to CEQA Guidelines § 15088.5(c), the City of Redding (City) is recirculating portions of the Draft Environmental Impact Report (EIR) prepared for the proposed River Crossing Marketplace Specific Plan project (State Clearinghouse No. 2017052030). The City received comments that the appendices to the Draft EIR involving the Health Risk Assessment and the Traffic Impact Assessment Report (TIAR) were either not included or were incomplete. The City has included this information in the recirculated Draft EIR. In addition, the City has revised the Air Quality and Greenhouse Gases sections to the Draft EIR to include additional information and reflect the most current case law.

The following documents are part of the recirculation:

## **Section 4.2 Air Quality**

Section 4.2, Air Quality, of the Draft EIR has been revised to consider emissions that will be generated by the construction of certain offsite traffic improvements that will occur at the same time as project construction. Revisions to this Draft EIR section are shown in ~~strike through~~ and underline to clearly show changes.

## **Section 4.6 Greenhouse Gases**

Section 4.6, Greenhouse Gases, of the Draft EIR has been revised to consider the effect of recent court decisions on the appropriate threshold of significance for greenhouse gasses. In addition, the revised section addresses greenhouse gas emissions that will be generated by the construction of certain offsite traffic improvements that will occur at the same time as project construction. Revisions to this Draft EIR section are shown in ~~strike through~~ and underline to clearly show changes.

## **Appendix 4.2-2 Health Risk Assessment**

The River Crossing Marketplace Specific Plan Health Risk Assessment was completed in August 2017 and used to prepare the analysis included as Impact AQ-6 beginning on page 4.2-18 of the Draft EIR. The appendix is referenced in the analysis but was not included on the CD or the City website during the public comment period. No changes have been made to the Health Risk Assessment as a result of this recirculation. However, an independent peer review of the Health Risk Assessment was conducted by the consulting firm Ramboll and is included in Appendix 4.2.-2 to this recirculated document. This peer review confirms the conclusions of the Health Risk Assessment and includes additional analysis for informational purposes.

## **Appendix 4.12-1 Traffic Impact Analysis**

The River Crossing Marketplace Specific Plan Traffic Impact Analysis Report (TIAR) was included in the Draft EIR, however a non-final draft, pre-production date of April 2018, was included rather than the final TIAR dated November 2018. Additionally, Appendix F to the TIAR titled "Final Traffic Volume

Forecasts” for the Bonnyview Interchange Project Study Report (PSR) (which includes a traffic volume forecasts memorandum and the Traffic Operations Report for the PSR) was not part of the document on the CD to the City website. The final November version of the TIAR was used to draft the impact analysis included in the Draft EIR, so no changes to the Draft EIR are necessary as a result of this recirculation.

This Recirculated Draft EIR has been prepared in compliance with CEQA Guidelines Section 15088.5. This document does not revise the EIR in any other respect than noted above, and the other portions of the EIR are not being recirculated for public review and comment.

### **Review and Comment**

In accordance with CEQA Guidelines § 15088.5(f)(2), the City requests that agencies and interested parties limit their comments to the modified portions of the Draft EIR only. Consistent with § 15088.5(f)(2), the City need only respond to (1) comments received during the initial circulation period that relate to chapters or portions of the document that were not revised and recirculated, and (2) comments received during the recirculation period that relate to the chapters or portions of the earlier EIR that were revised and recirculated.

**DOCUMENT AVAILABILITY:** Pursuant to CEQA Guidelines § 15087, responsible and trustee agencies and other interested parties, including members of the public, must submit any comments in response to this notice no later than Thursday, May 24, 2019. The recirculated portions of the Draft EIR are available for review at the following locations in addition to the City website (<https://www.cityofredding.org>):

- **Redding City Hall** located at 777 Cypress Avenue, Redding, CA 96001
- **Redding Library** located at 1100 Parkview Avenue, Redding, CA 96001

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**COMMENTS:** Written comments should be submitted to:

**Kent Manuel, Planning Manager (Special Projects)**

City of Redding

Development Services Department

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Email: [kmanuel@ci.redding.ca.us](mailto:kmanuel@ci.redding.ca.us)

## **2. *Executive Summary***

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The recirculated portions of the Draft EIR resulted in a change to mitigation measure AQ-1 to include a requirement for the use of Tier 3 and Tier 4 construction equipment. In addition, Impact Discussion AQ-5 was modified to require implementation of mitigation measure AQ-1. The results of the change in the mitigation measure are shown in Table 2-1. No other modifications to the impact analysis or mitigation measure(s) are required.

## **EXECUTIVE SUMMARY**

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## EXECUTIVE SUMMARY

TABLE 2-1 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

| Environmental Impact   | Level of Significance Without Mitigation   | Mitigation Measures   | Level of Significance With Mitigation |
|--|--|---|---------------------------------------|
| <b>4.2 Air Quality</b>   |  |   |                                       |
| <b>AQ-2:</b> Project implementation would not violate an air quality standard or contribute substantially to an existing or projected air quality violation during project construction. | Potentially Significant without Mitigation | <p><b>AQ-2:</b> Prior to issuance of a grading permit, the Project applicant shall submit a grading plan for review and approval by the City of Redding Development Services Department. The following specifications shall be included on the permit to reduce short-term air quality impacts attributable to the on-site and off-site construction activities:</p> <ul style="list-style-type: none"> <li>During all construction activities, all architectural coatings applied shall contain a low content of volatile organic compounds (VOC) (i.e., 100 grams/liter) as required by the Green Building Code and as adopted by the City of Redding.</li> <li>All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. Equipment maintenance records shall be kept on-site and made available upon request by the City of Redding or Shasta County AQMD.</li> <li>All material excavated, stockpiled, or graded shall be sufficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering shall occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day.</li> <li>All unpaved areas (including unpaved roads) with vehicle traffic shall be watered periodically or have dust palliatives applied for stabilization of dust emissions.</li> <li>All on-site vehicles shall be limited to a speed of 15 miles per hour on unpaved roads.</li> <li>All land clearing, grading, earth-moving, or excavation activities on the Project site shall be suspended when sustained winds are expected to exceed 20 miles per hour.</li> <li>All portions of the development site which have been stripped of vegetation by construction activities shall be stabilized in accordance with the approved SWPP.</li> <li>All trucks hauling dirt, sand, soil, or loose material shall be</li> </ul> | Less than Significant                 |

## EXECUTIVE SUMMARY

TABLE 2-1 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

| Environmental Impact  | Level of Significance Without Mitigation   | Mitigation Measures  | Level of Significance With Mitigation |
|---|--|--|---------------------------------------|
|   |  | <p>covered or shall maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and the trailer) in accordance with the requirements of California Vehicle Code Section 23114. This provision will be enforced by local law enforcement agencies.</p> <ul style="list-style-type: none"> <li>▪ All material transported off-site shall be either sufficiently watered or securely covered to prevent a public nuisance.</li> <li>▪ Prior to final occupancy, the applicant shall re-establish ground cover on the construction site through seeding and watering.</li> <li>▪ Off-road construction equipment shall not be left idling for periods longer than 5 minutes when not in use.</li> <li>▪ <u>All off-road diesel equipment greater than 50 horsepower (hp) shall meet USEPA Tier 3 or 4 off-road emission standards as set forth in Table 2: Construction Equipment-Inventory, included in Appendix 4.2-2.</u></li> </ul> |                                       |
| <b>AQ-5:</b> Implementation of the proposed Project would not expose sensitive receptors to substantial toxic air contaminant concentrations during project construction. | Potentially Significant without Mitigation | Mitigation Measure AQ-1  | Less than Significant                 |



## **4.2 AIR QUALITY**

This section describes the regulatory framework and existing conditions on the Project site related to air quality and the potential impacts of the Project on same.

### **4.2.1 ENVIRONMENTAL SETTING**

#### **4.2.1.1 REGULATORY FRAMEWORK**

##### **Federal and State Regulations**

###### *Ambient Air Quality Standards*

The proposed Project will release gaseous emissions of criteria pollutants and dust into the ambient air; therefore, development activities under the proposed Project fall under the ambient air quality standards promulgated at the local, state, and federal levels. The federal Clean Air Act of 1971 and the Clean Air Act Amendments (1977) established the national ambient air quality standards (NAAQS), which are promulgated by the U.S. Environmental Protection Agency (EPA). The State of California has also adopted its own California ambient air quality standards (CAAQS), which are promulgated by the California Air Resources Board (CARB). Implementation of the Project would occur in the Shasta County portion of the Northern Sacramento Valley Air Basin (NSVAB), which is under the air quality regulatory jurisdiction of the Shasta County Air Quality Management District (SCAQMD) and is subject to the rules and regulations adopted by the air district to achieve the NAAQS and CAAQS. Applicable federal, state, regional, and local laws, regulations, plans, and guidelines relevant to the California Environmental Quality Act (CEQA) review process are summarized below. As shown in Table 4.2-1, these pollutants include ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), coarse particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

###### *Air Quality Attainment Plans*

The proposed Project is located at the northern end of the NSVAB. In 1994, the air districts in the NSVAB, which includes the SCAQMD, prepared an air quality attainment plan for ozone. Updated every three years since adoption, the current *2015 Air Quality Attainment Plan* includes forecast reactive organic gases (ROG) and nitrogen oxide (NO<sub>x</sub>) emissions (ozone precursors) for the entire NSVAB through the year 2020.

The *2015 Air Quality Attainment Plan* provides local guidance for air basins to achieve attainment of ambient air quality standards. Areas that meet ambient air quality standards are classified as attainment areas; areas that do not meet these standards are classified as nonattainment areas. Areas for which there is insufficient data are designated unclassified. The attainment status for the Shasta County portion of the NSVAB is in Table 4.2-2. The region is nonattainment for state ozone and PM<sub>10</sub> standards.

## AIR QUALITY

TABLE 4.2-1 AIR QUALITY STANDARDS

| Pollutant                               | Averaging Time          | California Standards               | National Standards                 |
|---|-------------------------|------------------------------------|------------------------------------|
| Ozone (O <sub>3</sub> )                 | 8 Hour                  | 0.070 ppm (137 µg/m <sup>3</sup> ) | 0.070 ppm (137 µg/m <sup>3</sup> ) |
|   | 1 Hour                  | 0.09 ppm (180 µg/m <sup>3</sup> )  | —                                  |
| Carbon Monoxide (CO)                    | 8 Hour                  | 9.0 ppm (10 mg/m <sup>3</sup> )    | 9.0 ppm (10 mg/m <sup>3</sup> )    |
|   | 1 Hour                  | 20 ppm (23 mg/m <sup>3</sup> )     | 35 ppm (40 mg/m <sup>3</sup> )     |
| Nitrogen Dioxide (NO <sub>2</sub> )     | 1 Hour                  | 0.18 ppm (339 µg/m <sup>3</sup> )  | 100 ppb (188 µg/m <sup>3</sup> )   |
|   | Annual Arithmetic Mean  | 0.030 ppm (57 µg/m <sup>3</sup> )  | 0.053 ppm (100 µg/m <sup>3</sup> ) |
| Sulfur Dioxide (SO <sub>2</sub> )       | 24 Hour                 | 0.04 ppm (105 µg/m <sup>3</sup> )  | 0.14 ppm                           |
|   | 3 Hour                  | —                                  | —                                  |
|   | 1 Hour                  | 0.25 ppm (655 µg/m <sup>3</sup> )  | 75 ppb (196 µg/m <sup>3</sup> )    |
|   | Annual Arithmetic Mean  | —                                  | 0.030 ppm                          |
|   | 24 Hour                 | 50 µg/m <sup>3</sup>               | 150 µg/m <sup>3</sup>              |
| Particulate Matter (PM <sub>10</sub> )  | Annual Arithmetic Mean  | 20 µg/m <sup>3</sup>               | —                                  |
|   | 24 Hour                 | —                                  | 35 µg/m <sup>3</sup>               |
| Particulate Matter (PM <sub>2.5</sub> ) | Annual Arithmetic Mean  | 12 µg/m <sup>3</sup>               | 12.0 µg/m <sup>3</sup>             |
|   | 24 Hour                 | 25 µg/m <sup>3</sup>               | —                                  |
| Sulfates                                | 30 Day Average          | 1.5 µg/m <sup>3</sup>              | —                                  |
|   | Calendar Quarter        | —                                  | 1.5 µg/m <sup>3</sup>              |
| Lead                                    | Rolling 3-Month Average | —                                  | 0.15 µg/m <sup>3</sup>             |
|   | 1 Hour                  | 0.03 ppm (42 µg/m <sup>3</sup> )   | —                                  |
| Vinyl Chloride (chloroethene)           | 24 Hour                 | 0.01 ppm (26 µg/m <sup>3</sup> )   | —                                  |
| Visibility-Reducing Particles           | 8 Hour                  | —                                  | —                                  |

Source: California Air Resources Board, *Ambient Air Quality Standards*, 2016.

### Toxic Air Contaminant Regulations

In 1983, the California legislature enacted a program to identify the health effects of toxic air contaminants (TACs) and to reduce exposure to these contaminants to protect the public health. The Health and Safety Code defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” A

**AIR QUALITY****TABLE 4.2-2 FEDERAL AND STATE AMBIENT AIR QUALITY ATTAINMENT STATUS FOR SHASTA COUNTY**

| <b>Pollutant</b>                              | <b>Federal</b>          | <b>State</b>  |
|---|-------------------------|---------------|
| 8-Hour Ozone (O <sub>3</sub> )                | Unclassified/Attainment | Nonattainment |
| Course Particulate Matter (PM <sub>10</sub> ) | Unclassified            | Nonattainment |
| Fine Particulate Matter (PM <sub>2.5</sub> )  | Unclassified/Attainment | Attainment    |
| Carbon Monoxide (CO)                          | Unclassified/Attainment | Unclassified  |
| Nitrogen Dioxide (NO <sub>2</sub> )           | Unclassified/Attainment | Attainment    |
| Sulfur Dioxide (SO <sub>2</sub> )             | Unclassified            | Attainment    |

Source: California Air Resources Board, *State and Federal Area Designation Maps*, 2016.

substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal Clean Air Act (42 United States Code Section 7412[b]) is a TAC. Under state law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Health and Safety Code section 39650 et seq., passed as Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and Health and Safety Code Section 44300 et seq., passed as AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). Health and Safety Code Section 39650 sets forth a formal procedure for CARB to designate substances as toxic air contaminants. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit designated TACs. If there is a safe threshold for a substance (a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs that have no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics “Hot Spot” Information and Assessment Act of 1987 (Health and Safety Code Section 44300). TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

Since the last update to the TAC list in December 1999, CARB has designated 244 compounds as TACs.<sup>1</sup> Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

<sup>1</sup> California Air Resources Board (CARB), 1999. *Final Staff Report: Update to the Toxic Air Contaminant List*.

## AIR QUALITY

### *California Diesel Risk Reduction Plan*

In September 2000, CARB adopted the Diesel Risk Reduction Plan, which recommends many control measures to reduce the risks associated with diesel particulate matter (DPM) and achieve a goal of an 85 percent reduction of DPM generated by 2020. The Reduction Plan incorporates measures to reduce emissions from diesel-fueled vehicles and stationary diesel-fueled engines. Ongoing efforts by CARB include the development of specific statewide regulations, which are designed to further reduce DPM emissions. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards.

Since the initial adoption of the Reduction Plan in September 2000, CARB has adopted numerous rules related to the reduction of DPM from mobile sources as well as the use of cleaner-burning fuels. Transportation sources addressed by these rules include public transit buses, school buses, on-road heavy-duty trucks, and off-road heavy-duty equipment.

### *On-Road Heavy-Duty Diesel Vehicles (In Use) Regulation*

CARB's On-Road Heavy-Duty Diesel Vehicles (In Use) Regulation—which is a Final Regulation Order that amended Title 13 of the California Code of Regulations, Section 2025—requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks were required to be retrofitted with particulate matter filters beginning January 1, 2012, and older trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses as well as to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.

## Local Regulations

### *Shasta County Air Quality Management District*

The SCAQMD is designated by law to adopt and enforce regulations to achieve and maintain ambient air quality standards. The SCAQMD, along with other air districts in the NSVAB, has committed to jointly prepare the NSVAB Air Quality Attainment Plan for the purpose of achieving and maintaining healthful air quality throughout the air basin. In addition, the SCAQMD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs, and it regulates agricultural burning. Other responsibilities include monitoring air quality, preparing clean air plans, and responding to citizen complaints concerning air quality.

All projects in Shasta County are subject to applicable SCAQMD rules and regulations in effect at the time of construction. Descriptions of specific rules applicable to future construction resulting from implementation of the proposed Project may include, but are not limited to:

- SCAQMD Rule 2-1A, Authorities to Construct/Permits to Operate, allows any person to use construction equipment for construction activities, and must obtain a permit to operate prior to installation activities.

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- SCAQMD Rule 3-2, Specific Air Contaminants, controls the amount of air contaminants allowed to be discharged into the atmosphere.
- Architectural coatings and solvents used at the Project shall be compliant with SCAQMD Rule 3-31, Architectural Coatings.
- Cutback and emulsified asphalt application shall be conducted in accordance with SCAQMD Rule 3-15, Cutback and Emulsified Asphalt.
- SCAQMD Rule 3-16, Fugitive, Indirect, or Non-traditional Sources, controls the emission of fugitive dust during earth-moving, construction, demolition, bulk storage, and conditions resulting in wind erosion.

### *Redding General Plan*

The following goals and policies of the General Plan Air Quality Element are pertinent to the proposed Project:

#### Air Quality Element

**Goal 1:** Effective communication, cooperation, and coordination in developing and implementing community and regional air quality programs.

- Policy 1. The City will require an air quality impact analysis using the recommended methods promulgated by the Air Quality Management District (AQMD) for all projects that are subject to CEQA review and which exceed emissions thresholds established by the AQMD.
- Policy 2. Report on Cumulative Air Quality Impacts.
- Policy 8. Regional and Local Plan Consistency.

**Goal 3:** Reduce particulate emissions from sources under the jurisdiction of the City.

- Policy 29. The City will require measures to reduce particulate emissions from construction, grading, and demolition to the maximum extent feasible.

### *Redding Municipal Code*

#### Grading Ordinance

Chapter 16.12 of the Redding Municipal Code establishes minimum requirements for grading, clearing, and erosion and sediment control. The chapter requires issuance of a grading permit prior to any clearing or grading on privately owned land that is larger than one acre in size. Both an interim and a final erosion and sediment control plan are required as part of the grading permit process and must be prepared by a licensed professional and approved by the City Engineer. The plans must address the potential for soil erosion due to stormwater runoff and wind and include best management practices designed to ensure sediment does not leave the construction site. The City is responsible for inspection of construction sites to ensure compliance with provisions of the grading permit.

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### 4.2.1.2 EXISTING CONDITIONS

#### Northern Sacramento Valley Air Basin

The proposed Project is located at the northern end of the Northern Sacramento Valley Air Basin (NSVAB). The NSVAB consists of seven counties: Sutter, Yuba, Colusa, Butte, Glenn, Tehama, and Shasta. The NSVAB is bounded on the north and west by the Coastal Mountain Range and on the east by the southern end of the Cascade Mountain Range and the northern end of the Sierra Nevada. These mountain ranges reach heights in excess of 6,000 feet above mean sea level, with individual peaks rising much higher. The mountains form a substantial physical barrier to locally created pollution as well as to pollution transported northward on prevailing winds from the Sacramento metropolitan area.<sup>2</sup>

The environmental conditions of Shasta County are conducive to potentially adverse air quality conditions. The basin area traps pollutants between two mountain ranges to the east and the west. This problem is exacerbated by a temperature inversion layer that traps air at lower levels below an overlying layer of warmer air. Prevailing winds in the area are generally from the south and southwest. Sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas. Growth and urbanization in Shasta County have also contributed to an increase in emissions.

#### Air Pollutants of Concern

##### *Criteria Air Pollutants*

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state laws. These regulated air pollutants are known as “criteria air pollutants” and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), coarse particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), lead, and fugitive dust are primary air pollutants. Of these, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are criteria pollutants. ROG and NO<sub>x</sub> are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O<sub>3</sub>) and nitrogen dioxide (NO<sub>2</sub>) are the principal secondary pollutants.

Sources and health effects commonly associated with criteria pollutants are summarized in Table 4.2-3.

##### Criteria Air Pollutant Monitoring Data

Ambient air quality in Redding, including the Project site, can be inferred from ambient air quality measurements conducted at air quality monitoring stations. Existing levels of ambient air quality and historical trends and projections in the region are documented by measurements made by the SCAQMD. These measurements are affected by pollutants generated by the urbanized land uses in Shasta County as well as by land uses in the entire NSVAB and beyond.

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<sup>2</sup> Sacramento Valley Air Quality Engineering and Enforcement Professionals, 2015. *Northern Sacramento Valley Planning Area: 2015, Triennial Air Quality Attainment Plan*, August.

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**TABLE 4.2-3 CRITERIA AIR POLLUTANTS SUMMARY OF COMMON SOURCES AND EFFECTS**

| Pollutant  | Major Man-Made Sources  | Human Health & Welfare Effects  |
|--|---|---|
| Carbon Monoxide (CO)                                       | An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.   | Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.   |
| Nitrogen Dioxide (NO <sub>2</sub> )                        | A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.  | Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.  |
| Ozone (O <sub>3</sub> )                                    | Formed by a chemical reaction between volatile organic compounds (VOC) and NO <sub>x</sub> in the presence of sunlight. VOCs are also commonly referred to as reactive organic gases (ROGs). Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills. | Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.               |
| Particulate Matter (PM <sub>10</sub> & PM <sub>2.5</sub> ) | Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood burning stoves and fireplaces, automobiles, and others.  | Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze). |
| Sulfur Dioxide (SO <sub>2</sub> )                          | A colorless, nonflammable gas formed when fuel containing sulfur is burned; when gasoline is extracted from oil; or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.   | Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.                         |

Source: California Air Pollution Control Officers Association, *Health Effects*, 2013.

Ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> are the primary pollutants affecting the NSVAB. The nearest air quality monitoring site to the Project site that monitors ambient concentrations of ozone and airborne particulates is located on the roof of the Shasta County Health and Human Services Agency (2630 Breslauer Way, Redding CA 96001), approximately 1.4 miles northwest of the Project site. Table 4.2-4 summarizes the published data since 2014 for each year that the monitoring data are provided.

### *Toxic Air Contaminants*

In addition to the criteria pollutants discussed above, TACs are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs are generally assumed to have a safe level of exposure, which is determined on a pollutant-by-pollutant basis.

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**TABLE 4.2-4 AMBIENT AIR QUALITY MONITORING DATA**

| Pollutant Standards                     |  | 2014          | 2015          | 2016          |
|---|--|---------------|---------------|---------------|
| Ozone (O <sub>3</sub> )                 | Max 1-hour concentration (ppm)                                 | 0.090         | 0.078         | 0.084         |
|   | Max 8-hour concentration (ppm) (state/federal)                 | 0.079 / 0.078 | 0.069 / 0.069 | 0.074 / 0.074 |
|   | Number of days above state/ federal 1-hour standard            | 0 / 0         | 0 / 0         | 0 / 0         |
|   | Number of days above state/federal 8-hour standard             | 5 / 5         | 0 / 0         | 5 / 5         |
| Particulate Matter (PM <sub>10</sub> )  | Max 24-hour concentration (µg/m <sup>3</sup> ) (state/federal) | 72.8 / 71.7   | 78.3 / 80.3   | 27.6 / 28.4   |
|   | Number of days above state/federal standard                    | * / 0         | 6.5 / 0       | 0 / 0         |
| Particulate Matter (PM <sub>2.5</sub> ) | Max 24-hour concentration (µg/m <sup>3</sup> ) (state/federal) | 22.2 / 22.2   | 64.6 / 64.6   | 12.6 / 12.6   |
|   | Number of days above federal standard                          | 0             | 6.6           | 0             |

Notes: ug/m3 = micrograms per cubic meter; ppm = parts per million; \* = No data currently available to determine the value.

Source: California Air Resources Board, 2016. Aerometric Data Analysis and Management System (ADAM) Air Quality Data Statistics.

There are many different types of TACs and varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally (as TACs rapidly disperse from the source). TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

Most recently, CARB identified DPM as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because many compounds in diesel exhaust are carcinogenic. The chemical composition and particle sizes of DPM vary between engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine.<sup>3</sup> Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk of all the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Residential areas are considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children are considered more susceptible to health effects of air pollution due to their

<sup>3</sup> U.S. Environmental Protection Agency, 2002. *Health Assessment Document for Diesel Engine Exhaust*.



immature immune systems and developing organs.<sup>4</sup> Therefore, schools are also considered sensitive receptors because children are present for extended durations and engage in regular outdoor activities. The nearest residential land uses would be those adjacent to the Project site on the northern boundary. There are also residences on the east side of Interstate 5 that are approximately 600 feet from the northeast corner of the Project site and approximately 700 feet south of the southwest corner of project site. No schools, hospitals, or senior care homes are within 0.25 miles of the Project site.

## 4.2.2 STANDARDS OF SIGNIFICANCE

The proposed Project would result in a significant impact to air quality if it would:

1. Conflict with or obstruct implementation of any applicable air quality plan. (Refer to Impact Discussion AQ-1)
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation. (Refer to Impact Discussion AQ-2 and AQ-3)
3. Expose sensitive receptors to substantial pollutant concentrations. (Refer to Impact Discussion AQ-4, AQ-5, and AQ-6)
4. Create objectionable odors affecting a substantial number of people. (Refer to Impact Discussion AQ-7)
5. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

SCAQMD and the City of Redding Air Quality Element thresholds (which are identical) have been used to determine air quality impacts in this analysis. These thresholds are consistent with New Source Review Rule 2-1 adopted by the SCAQMD Board in 1993, as required by the California Clean Air Act. The thresholds of significance are summarized in Table 4.2-5.

**TABLE 4.2-5 SHASTA COUNTY AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS OF SIGNIFICANCE**

| Threshold          | Emissions (Maximum Pounds per Day) |     |                  |
|--------------------|------------------------------------|-----|------------------|
|                    | NO <sub>x</sub>                    | ROG | PM <sub>10</sub> |
| Level A Thresholds | 25                                 | 25  | 80               |
| Level B Thresholds | 137                                | 137 | 137              |

Source: Shasta County Air Quality Management District.

The SCAQMD and the General Plan recommend that projects apply Standard Mitigation Measures (SMM) and appropriate Best Available Mitigation Measures (BAMM) when a project exceeds Level A thresholds and SMM, BAMM, and special BAMM when a project exceeds Level B thresholds. Projects that cannot

<sup>4</sup> Office of Environmental Health Hazard Assessment, 2007. *Air Toxicology and Epidemiology: Air Pollution and Children's Health*.

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mitigate emissions to levels below the Level B thresholds are considered significant. Based on these standards, the effects of the proposed Project have been categorized as either a “less than significant impact” or a “potentially significant impact.” Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less-than-significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

### 4.2.3 IMPACT DISCUSSION

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| <b>AQ-1</b> | <b>Implementation of the proposed Project would conflict with or obstruct implementation of the 2015 Air Quality Attainment Plan. [Significant and Unavoidable]</b> |
|-------------|---|

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Under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date. As previously stated, the Shasta County portion of the NSVAB is classified nonattainment for state ozone and PM<sub>10</sub> standards (refer to Table 4.2-2).

The *2015 Air Quality Attainment Plan* is the most recent air quality planning document covering Shasta County. Air quality attainment plans are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls describing how the state will attain ambient air quality standards. State law makes CARB the lead agency for all purposes related to the Air Quality Attainment Plan. Local air districts prepare air quality attainment plans and submit them to CARB for review and approval. The *2015 Air Quality Attainment Plan* includes forecast ROG and NO<sub>x</sub> emissions (ozone precursors) for the entire NSVAB through the year 2020.

The consistency of the proposed Project with the *2015 Air Quality Attainment Plan* is determined by its consistency with air pollutant emission projections in the plan. Implementation of the Project could increase vehicle miles traveled, and thus ROG and NO<sub>x</sub> emissions, which could conflict with air quality planning in the *2015 Air Quality Attainment Plan*. As previously stated, the plan cites projected O<sub>3</sub> precursor emissions (ROG and NO<sub>x</sub>) through the year 2020. For the purposes of this analysis, the emissions resulting from proposed Project operations were quantified and compared with the *2015 Air Quality Attainment Plan* 2020 ozone precursor emissions projections.

The *2015 Air Quality Attainment Plan* includes control strategies necessary to attain the California ozone standard at the earliest practicable date, as well as developed emissions inventories and associated emissions projections for the region showing a downtrend for both ROG and NO<sub>x</sub>. The proposed Project would result in long-term emissions from area and mobile emission sources. As discussed in Impact AQ-3, below, the ozone precursor emissions, ROG and NO<sub>x</sub> would increase as a result of the Project. The upward trend in ozone precursor emissions is not consistent with the projected ozone emissions reductions documented in the *2015 Air Quality Attainment Plan*, which projects a 5.76 percent reduction in ROG emissions and a 20.27 percent reduction in NO<sub>x</sub> emissions from area and mobile sources in the NSVAB by the year 2020 (the latest year projected in the *2015 Air Quality Attainment Plan*). Operation of the Project would increase O<sub>3</sub> precursor emissions by approximately 0.02 ton of ROG and 0.08 ton of NO<sub>x</sub> daily. This

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increase would represent a 0.02 percent increase in ROG emissions and a 0.1 percent increase in NO<sub>x</sub> emissions compared with existing projections. Additionally, as identified in Impact AQ-3, the Project would violate the SCAQMD standard for the ozone precursor, NO<sub>x</sub>. Therefore, the proposed Project would conflict with implementation of the *2015 Air Quality Attainment Plan* by resulting in an increase of ozone precursor emissions. As discussed in Impact AQ-3, the majority of Project emissions would be generated by mobile sources, which cannot be regulated by the City. While there are no feasible mitigations that would reduce vehicle trips, as discussed in Impact AQ-3, the Project will install electric vehicle supply equipment in accordance with California Building Code which will allow charging stations to be supplied based on demand. Charging stations could lead to less use of gasoline-burning automobiles and thus, less air pollutant emissions. However, in a retail environment where customers typically spend less than an hour in the store, the vehicle is not there long enough for a meaningful charge, and charging stations often go unused. Additionally, the Project buildings would be more energy efficient than commercial buildings built just three years ago. Nonetheless, there are no feasible mitigations that would reduce ozone precursor emissions consistent with the *2015 Air Quality Attainment Plan*, and this impact is considered significant and unavoidable.

**Significance Without Mitigation:** Significant and unavoidable.

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|-------------|--|
| <b>AQ-2</b> | <b>Project implementation would not violate an air quality standard or contribute substantially to an existing or projected air quality violation during project construction. [Less Than Significant With Mitigation]</b> |
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Construction-generated emissions are assumed to occur during approximately 11 months estimated for construction. Emissions commonly associated with construction activities include fugitive dust from soil disturbance and fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips. During construction, fugitive dust, the dominant source of PM<sub>10</sub> and PM<sub>2.5</sub> (particulate matter smaller than 2.5 microns), is generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities. Also, off-road construction equipment is often diesel-powered and can be a substantial source of NO<sub>x</sub> emissions, and worker commute trips and architectural coatings are dominant sources of ROG emissions.

The proposed Project consists of on-site construction and off-site construction activities. On-site activities include the removal and off-site hauling of all vegetation on the Project site followed by construction of five retail pads accommodating approximately 70,100 square feet of retail and fast food restaurants and a ±152,000-square-foot Costco Whole Corporation store with up to 30 fuel pumps. Total on-site ground disturbance would equal 25.4 acres. Off-site construction includes the freeway ramp, roadway, and intersection improvements to accommodate Project traffic.

Construction air emissions were quantified using the CalEEMod land use emissions model (refer to Appendix 4.2 for model data outputs). Predicted maximum daily construction-generated emissions for the proposed Project are summarized and compared to SCAQMD significance thresholds in Table 4.2-6.

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TABLE 4.2-6 CONSTRUCTION-RELATED EMISSIONS

| Construction                   | Emissions (Maximum Pounds per Day) <sup>1</sup> |                 |                  |                   |              |
|--------------------------------|---|-----------------|------------------|-------------------|--------------|
|                                | ROG   | NO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> | CO           |
| <b>Unmitigated</b>             |   |                 |                  |                   |              |
| <u>2019</u>                    | <u>49.30</u>                                    | <u>126.38</u>   | <u>13.21</u>     | <u>4.95</u>       | <u>94.08</u> |
| <u>2020</u>                    | <u>45.26</u>                                    | <u>76.99</u>    | <u>7.55</u>      | <u>3.27</u>       | <u>70.60</u> |
| Level A Significance Threshold | 25  | 25              | 80               | None              | None         |
| Exceed Level A Threshold       | Yes   | Yes             | No               | N/A               | N/A          |
| Level B Significance Threshold | 137   | 137             | 137              | None              | None         |
| Exceed Level B Threshold?      | No  | No              | No               | N/A               | N/A          |

Source: CalEEMod, version 2016.3.1. See **Appendix 4.2-1** for emission model outputs.  
Assumes implementation of Mitigation Measure AQ-1.

Table 4.2-6 shows that daily emissions associated with the construction of the proposed Project would exceed the Level A significance threshold for ROG and NO<sub>x</sub> emissions. No pollutants would surpass the Level B significance thresholds during the assumed construction period. The SCAQMD recommends that projects apply SMM and appropriate BMM when a project exceeds Level A thresholds in order to be considered less than significant. To comply with SCAQMD recommendations, Mitigation Measure AQ-1 is required, which includes various dust control measures to reduce fugitive PM<sub>10</sub> and PM<sub>2.5</sub>, such as regular watering of disturbed areas, providing track-out devices that reduce soil from trucks being ‘tracked’ onto adjacent roadways, covering stockpiles, and limiting on-site vehicle speeds, as well as the use of Tier 3 and Tier 4 off-road construction equipment. Implementation of Mitigation Measure AQ-1 would reduce impacts resulting from construction-generated emissions associated with Project construction.

**Significance Without Mitigation:** Potentially significant.

**Mitigation Measure AQ-1:** Prior to issuance of a grading permit, the Project applicant shall submit a grading plan for review and approval by the City of Redding Development Services Department. The following specifications shall be included on the permit to reduce short-term air quality impacts attributable to the on-site and off-site construction activities:

- During all construction activities, all architectural coatings applied shall contain a low content of volatile organic compounds (VOC) (i.e., 100 grams/liter) as required by the Green Building Code and as adopted by the City of Redding.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturers’ specifications. Equipment maintenance records shall be kept on-site and made available upon request by the City of Redding or Shasta County AQMD.
- All material excavated, stockpiled, or graded shall be sufficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering shall occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day.

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- All unpaved areas (including unpaved roads) with vehicle traffic shall be watered periodically or have dust palliatives applied for stabilization of dust emissions.
- All on-site vehicles shall be limited to a speed of 15 miles per hour on unpaved roads.
- All land clearing, grading, earth-moving, or excavation activities on the Project site shall be suspended when sustained winds are expected to exceed 20 miles per hour.
- All portions of the development site which have been stripped of vegetation by construction activities shall be stabilized in accordance with the approved SWPPP.
- All trucks hauling dirt, sand, soil, or loose material shall be covered or shall maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and the trailer) in accordance with the requirements of California Vehicle Code Section 23114. This provision will be enforced by local law enforcement agencies.
- All material transported off-site shall be either sufficiently watered or securely covered to prevent a public nuisance.
- Prior to final occupancy, the applicant shall re-establish ground cover on the construction site through seeding and watering.
- Off-road construction equipment shall not be left idling for periods longer than 5 minutes when not in use.
- All off-road diesel equipment greater than 50 horsepower (hp) shall meet USEPA Tier 3 or 4 off-road emission standards as set forth in Table 2: Construction Equipment Inventory, included in Appendix 4.2-2.

Implementation of Mitigation Measure AQ-1 will be required as part of any grading permit issued for the Project. The provisions of the grading permit will be approved by the City Engineer, and compliance assured during construction by inspection as required by Section 16.12.190 of the Redding Municipal Code. As shown in Table 4.2-6, Project emissions do not exceed the SCAQMD Level B Threshold, impacts from construction-generated air pollutants would be less than significant with the implementation of mitigation.

**Significance With Mitigation:** Less than significant.

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| <b>AQ-3</b> | <b>Project implementation would violate an air quality standard or contribute substantially to an existing or projected air quality violation during project operations. [Significant and Unavoidable]</b> |
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The proposed Project would result in increased regional emissions of PM<sub>10</sub> and PM<sub>2.5</sub>, ROG, NO<sub>x</sub>, and CO due to an increased use of motor vehicles, natural gas, maintenance equipment, and various consumer products, thereby increasing potential operational air quality impacts. Increases in operational air impacts with the proposed Project would generally consist of three sources: area, energy, and mobile. Area sources are defined as fireplaces, consumer products, area architectural coatings, and landscaping

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equipment. Energy sources include natural gas emission variables, and mobile sources include automobiles. Predicted maximum daily emissions are summarized in Table 4.2-7.

**TABLE 4.2-7 OPERATIONAL-RELATED EMISSIONS**

|                                       |                     | Emissions (Pounds per Day) |                      |                     |                    |                      |
|---------------------------------------|---------------------|----------------------------|----------------------|---------------------|--------------------|----------------------|
| Pollutant Standards                   |                     | ROG                        | NO <sub>x</sub>      | PM <sub>10</sub>    | PM <sub>2.5</sub>  | CO                   |
| <u>Summer</u>                         | <u>Area</u>         | <u>6.62</u>                | <u>0</u>             | <u>0</u>            | <u>0</u>           | <u>0.08</u>          |
|                                       | <u>Energy</u>       | <u>0.11</u>                | <u>1.02</u>          | <u>0.07</u>         | <u>0.07</u>        | <u>0.86</u>          |
|                                       | <u>Mobile</u>       | <u>25.77</u>               | <u>151.09</u>        | <u>28.68</u>        | <u>8.12</u>        | <u>172.29</u>        |
|                                       | <b><u>Total</u></b> | <b><u>32.51</u></b>        | <b><u>152.11</u></b> | <b><u>28.76</u></b> | <b><u>8.20</u></b> | <b><u>173.24</u></b> |
| <u>Winter</u>                         | <u>Area</u>         | <u>6.62</u>                | <u>0</u>             | <u>0</u>            | <u>0</u>           | <u>0.08</u>          |
|                                       | <u>Energy</u>       | <u>0.11</u>                | <u>1.02</u>          | <u>0.07</u>         | <u>0.07</u>        | <u>0.86</u>          |
|                                       | <u>Mobile</u>       | <u>18.81</u>               | <u>153.58</u>        | <u>28.70</u>        | <u>8.14</u>        | <u>175.38</u>        |
|                                       | <b><u>Total</u></b> | <b><u>25.54</u></b>        | <b><u>154.61</u></b> | <b><u>28.78</u></b> | <b><u>8.22</u></b> | <b><u>176.33</u></b> |
| Level <b>A</b> Significance Threshold |                     | 25                         | 25                   | 80                  | None               | None                 |
| Exceed Level <b>A</b> Threshold       |                     | Yes                        | Yes                  | No                  | N/A                | N/A                  |
| Level <b>B</b> Significance Threshold |                     | 137                        | 137                  | 137                 | None               | None                 |
| <b>Exceed Level B Threshold?</b>      |                     | <b>No</b>                  | <b>Yes</b>           | <b>No</b>           | <b>N/A</b>         | <b>N/A</b>           |

Source: CalEEMod, version 2016.3.1. See **Appendix 4.2** for emission model outputs.

As depicted in Table 4.2-7, emissions associated with operations of the proposed Project would exceed Level A significance thresholds for ROG and NO<sub>x</sub>, as well as Level B significance thresholds for NO<sub>x</sub>. The SCAQMD recommends that projects apply SMM, BMM when a project exceeds Level A thresholds, and special BMM when a project exceeds Level B thresholds. SCAQMD operational SMMs and BMMs are summarized in Appendix 4.2-1.

The proposed Project would be constructed to comply with the 2016 Title 24 Building Codes, which result in a 5 percent increase in energy efficiency in commercial buildings when compared with the 2013 Title 24 Building Codes. Increases in building energy efficiency results in a reduction of pollutant emissions.

As shown in Table 4.2-7, Level B significance thresholds are exceeded for NO<sub>x</sub>. The majority of NO<sub>x</sub> emissions would be generated by mobile sources, which is an emission source that cannot be regulated by the City of Redding. A reduction in vehicle trips to and from the proposed Project would reduce the amount of mobile emissions. Methods for reducing personal vehicle trips include carpooling, transit, cycling, and pedestrian connections. Roadway improvements along the frontage of Bechelli Lane and

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South Bonnyview Road would include sidewalks and be consistent with the City of Redding road standards, which include Class 2 bicycle lanes that are part of a City-wide network. As required by the California Building Code and described in the Project Description in chapter 3, areas to secure bicycles will be provided within the proposed Project. However, even with the connectivity provided by the roadway improvements and the areas to secure bicycles, there is no way to know if employees or customers will cycle to the proposed Project. According to the Alliance for Biking and Hiking,<sup>5</sup> 1.1 percent of Californians commute to work via bicycling and/or walking. Furthermore, the Shasta Bike Challenge 2017<sup>6</sup> reports that the City of Redding ranked #1 in California and #2 in the United States as the most active in the 2017 National Bike Challenge, with an average of 152 cyclists logging in at least one bike trip daily over the month of May. However, discount warehouses typically provide bulk sales to the general public, and it is unlikely that a large number of these customers would ride bikes to the store, although some may. Pedestrians and cyclists may be attracted to the 70,000 square feet of proposed retail and restaurants.<sup>7</sup>

There is no certainty that the number of vehicle trips would be sufficiently lowered by pedestrians or cyclists to reduce ROG or NOx emissions shown in Table 4.2-7.

The Redding Area Bus Authority (RABA) provides transit service to the City of Redding. The use of transit service over passenger automobiles can result in a reduction of daily air pollutants. However, while there is an existing bus turnout on southbound Bechelli Lane along the frontage of Blue Shield, the area is not identified on any service route by RABA and is not identified as a bus stop. Furthermore, as there are no roadway improvements along the proposed Project frontage along Bechelli Lane, there is no corresponding bus turnout heading northbound. The nearest bus stop to the proposed Project is located at Loma Vista Drive and Bechelli Lane (near Lassen School) and is served by Route 4. The proposed Project site is approximately 0.8 mile from this bus stop on Loma Vista Drive and Bechelli Lane. Although customers at a warehouse store are unlikely to use transit because of bulk good purchases, customers at other stores anticipated in the retail center could make effective use of transit. In addition, employees could also use transit. Routes are established by the Joint Powers Authority composed of Shasta County and the cities of Redding, Anderson, and Shasta Lake. It is unknown at this time whether RABA would extend one or more bus routes to the Project site, and neither the applicant nor the City has jurisdiction over the bus routes and therefore cannot unilaterally extend a route or activate a bus stop.

Other best management practices include preferred parking for carpool or rideshare at the proposed Project. However, while it is possible that employees would carpool or rideshare to one or more of the businesses in the proposed Project, this type of vehicle trip reduction strategy is more effective for professional office buildings, where hours of operation are standardized, allowing for better coordination of start and stop times. While designating one or more parking spaces for carpool or ridesharing may reduce vehicle trips, it is unlikely that there would be sufficient usage to affect the operational emissions from mobile sources reported in Table 4.2-7.

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<sup>5</sup> Alliance of Biking and Walking, 2016. *Bicycling and Walking in the United States Benchmarking Report*.

<sup>6</sup> Shasta Bike Challenge 2017, 2017. *2017 Shasta Bike Challenge May 1–31*. <http://healthyshasta.org/bikechallenge/>.

<sup>7</sup> Appendix 4.2-1 analyzed 70,000 square feet of retail and restaurants. Changes to the site plan since submittal of the analysis have reduced the square footage. The results of the analysis remain valid and are considered conservative because the project is smaller than originally analyzed.

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The California Building Code does require that 6 percent of the Project parking stalls be fitted with electric vehicle supply equipment (EVSE) in accordance with the California Building Code and the California Electrical Code. Additionally, the CalGreen Building Code also requires that 8 percent of the Project parking stalls be reserved as preferred parking for clean air vehicles (there is no requirement for a rideshare or carpool parking area). As demand warrants, encouragement of electric vehicles and clean air vehicles through the provision of charging facilities and preferred parking could lead to reduced use of gasoline-burning automobiles and thus, less air pollutant emissions. However, there is no certainty that the provision of electric charging facilities and/or preferred parking for clean air vehicles would result in a substantial replacement of fossil-fuel burning automobiles with less-polluting vehicles. Therefore, it cannot be ensured that pollutant emissions of ROG or NO<sub>x</sub> would be sufficiently lowered.

Since NO<sub>x</sub> cannot be reduced to a less-than-significant level, and there are no feasible mitigations that would reduce vehicle trips, this impact is considered significant and unavoidable.

The SCAQMD has set its CEQA significance thresholds for NO<sub>x</sub> at 25 tons per year (expressed as 137 pounds per day) based on the Federal Clean Air Act (FCAA), which defines a major stationary source (in federal ozone attainment areas such as the Shasta County portion of the NSVAB) as emitting 25 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and SCAQMD Rule 1303 for new or modified sources. The NSR Program<sup>8</sup> was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the SCAQMD's emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

NO<sub>x</sub> is a precursor emission that forms ozone in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. Breathing ground-level ozone can result health effects that include reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily ozone concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that ozone can make asthma symptoms worse and can increase sensitivity to asthma triggers.

Table 4.2-7 shows that a large proportion of the Project's NO<sub>x</sub> emissions are from mobile sources. Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. CARB (a branch of the California Environmental Protection Agency) is

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<sup>8</sup> Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)]



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primarily responsible for controlling pollution from motor vehicles. The air districts must adopt rules to achieve and maintain the state and Federal ambient air quality standards within their jurisdictions.

Ozone and NO<sub>x</sub> have been decreasing in the California since 1975 and are projected to continue to decrease in the future. Although vehicle miles traveled across the state continue to increase, NO<sub>x</sub> levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO<sub>x</sub> emissions from electric utilities have also decreased due to the use of cleaner fuels and renewable energy.

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (Sierra Club v. County of Fresno [Friant Ranch, L.P.] [2018] 6 Cal.5<sup>th</sup> 502, Case No. S219783). As noted above and shown in Table 4.2-7, the Project's operational emissions would exceed the SCAQMD's NO<sub>x</sub> significance threshold, resulting in a significant and unavoidable impact.

Pursuant to Rule 8.520(f) of the California Rules of Court, the South Coast Air Quality Management District (SCAQMD) and the San Joaquin Valley Unified Air Pollution Control District (SJVAPCD) filed Amicus Curiae Briefs (amicus briefs) in regard to this case. In both amicus briefs, SCAQMD and SJVAPCD provided technical explanations as to why it may not be feasible for a project to relate the expected adverse air quality impacts to likely health consequences. As summarized below, for the reasons set forth in the SCAQMD and SJVAPCD amicus briefs, the proposed Project's significant air quality impacts currently cannot feasibly be related to likely health consequences. The technical demands to feasibly and accurately relate the adverse air quality impacts to likely health consequences are too high for this proposed Project at this time. The technical challenges are listed below, with the SCAQMD and SJVAPCD amicus briefs providing support on the findings for the proposed Project:

- **Ozone is not formed at the location of sources/emissions, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the proposed Project at this time.**

"For the so-called criteria pollutants, such as ozone, it may be more difficult to quantify health impacts. Ozone is formed in the atmosphere from the chemical reaction of the nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) in the presence of sunlight... It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources." [SCAQMD p.11]

- **Ozone and secondary PM formation is complex, which necessitates the use of more sophisticated modeling that is not reasonably feasible for the Project at this time. The proposed Project, while much smaller in scale to the Friant Ranch project, similarly includes area wide sources and mobile sources.**

"Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single 'point source,' but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site." [SJVAPCD p.9]

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- The quantity of precursor emissions is not proportional to local ozone and secondary PM concentration, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the proposed Project at this time.

“Ground level ozone (smog) is not directly emitted into the air, but is formed when precursor pollutants such as oxides of nitrogen (NOx) and volatile organic compounds (VOCs) are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight. Once formed, ozone can be transported long distances by wind. Because of the complexity of ozone formation, a specific tonnage amount of NOx or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area.” [SJVAPCD p.4]

“Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SOx) and NOx. Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.” [SJVAPCD p.5]

- Emissions do not cause health effects – it is the resulting concentration of criteria pollutants, which is influenced by sunlight, complex reactions, and transport, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the proposed Project at this time.

“The disconnect between the tonnage of precursor pollutants (NOx, SOx and VOCs) and the concentration of ozone or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or PM.” [SJVAPCD p.5]

- Currently available modeling tools are appropriate for regional evaluations, but not individual projects like the proposed Project.

“For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NOx, SOx and VOCs) and the atmospheric chemistry and meteorology of the Valley... the models simulate future ozone or PM levels based on predicted changes in precursor emissions Valley wide... The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which *all* of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.” [SJVAPCDF p.6-7]

“Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, "cumulative impacts."” [SJVAPCD p.8]

“...the currently available modeling tools are equipped to model the impact of all emission sources in the Valley on attainment... Running the photochemical grid model used for predicting ozone attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information given the relative scale involved.” [SJVAPCD p.9-10]

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- The SJVAPCD indicates that it is currently impossible to accurately correlate project level emissions to specific health impacts.

“Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.” [SJVAPCD p.10]
- SCAQMD highlights that CARB indicated that a CARB methodology of analysis for PM2.5 health impacts is not suited for small projects.
  - “Also, the California Air Resources Board (CARB) has developed a methodology that can predict expected mortality (premature deaths) from large amounts of PM2.5... SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1837 lbs/day) Again, this project involved large amounts of additional PM2.5 in the District, up to 2.82 tons/day (5,650 lbs/day of PM2.5, or, or 1029 tons/year... However, the primary author of the CARB methodology has reported that this PM2.5 health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties.” “Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts.” [SCAQMD p.14]
- SCAQMD indicates that the CARB PM2.5 methodology would provide unreliable findings for a small project with a small population and that a lead agency should be able to decide if and when it may be appropriate.

“Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small PM2.5 increases (3.8 lb/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated PM2.5 emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so... SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information” [SCAQMD p.15]

“This CEQA document was not challenged in court.” [SCAQMD p.15]
- The development of new technical approaches in the future may change the feasibility determination.

“Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths.” [SCAQMD p.16]

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For the reasons set forth above, it is not currently feasible to relate the proposed Project's air quality NO<sub>x</sub> impacts to likely health consequences. Both SCAQMD and SJVAPCD are responsible for assessing ozone and PM impacts regionally, and the potential health consequences from those on a regional basis. The current evaluation on the limitations and uncertainties of existing tools is consistent with SCAQMD and SJVAPCD findings. Currently available regional modeling tools are not designed to capture changes in pollutant concentrations for this proposed Project that would be meaningful. This is due in part to a relatively coarse spatial resolution (e.g., greater than 4-kilometer x 4 kilometer) which makes it speculative to discern local project impacts on air quality. For the proposed Project, mass operational emissions operation for NO<sub>x</sub> would exceed the applicable threshold. NO<sub>x</sub> impacts cannot be mitigated to less than significance and are considered significant and unavoidable. Annual operational emissions of NO<sub>x</sub> are approximately 28 tons per year, primarily from mobile sources. This is approximately 30 percent of the annual NO<sub>x</sub> emissions estimated for the Friant Ranch project [SJVAPCD p.8], even smaller than the quantity emitted for the project that the SJVAPCD argued it was not feasible at this time to quantify the health impacts.

**Significance Without Mitigation:** Significant and unavoidable.

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| <b>AQ-4</b> | <b>Project implementation would not expose sensitive receptors to substantial carbon monoxide pollutant concentrations. [Less than Significant]</b> |
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It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections may reach unhealthy levels, affecting nearby sensitive receptors. Areas of high CO concentrations, or "hot spots," are typically associated with such intersections. However, CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined.

Accordingly, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the South Coast Air Quality Management District's *1992 Federal Attainment Plan for Carbon Monoxide* (1992 CO Plan) in Southern California was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon periods. The busiest intersection evaluated had a traffic volume of approximately 100,000 vehicles per day, and the level of service (LOS) was LOS E at peak morning traffic and LOS F at peak afternoon traffic—i.e., from highly congested to practically stopped. Even under these conditions, the CO analysis concluded that there was no violation of CO standards.<sup>9</sup>

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<sup>9</sup> South Coast Air Quality Management District (SCAQMD), 1992. *1992 Federal Attainment Plan for Carbon Monoxide*.

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According to the proposed Project’s traffic impact analysis (refer to Appendix 4.12), the proposed Project would result in approximately 9,160 vehicles per day. Because the proposed Project would not increase traffic volumes at any intersection to more than 100,000 vehicles per day, there is no likelihood of the Project traffic exceeding CO values. Therefore, this impact would be considered less than significant.

**Significance Without Mitigation:** Less than significant.

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**AQ-5                      Implementation of the proposed Project would not expose sensitive receptors to substantial toxic air contaminant concentrations during project construction. [Less Than Significant With Mitigation]**

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Construction-related activities would result in temporary, short-term project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading), soil-hauling truck traffic, paving, application of architectural coatings, and other miscellaneous activities. For construction activity, the potential cancer risk from the inhalation of DPM, discussed below, outweighs the potential for all other health impacts (i.e., noncancer chronic risk, short-term acute risk) from DPM or other TACs. Accordingly, DPM is the focus of this discussion.

Based on the emission modeling conducted and presented in Table 4.2-6, above, the maximum construction-related daily emissions of exhaust PM<sub>2.5</sub>—considered a surrogate for DPM—would be 3.19 pounds/day. Furthermore, DPM would be generated from different locations on the Project site rather than a single location, because different construction activities (e.g., site preparation, building construction) would not all happen at the same place at the same time. The “dose” that receptors are exposed to is the primary factor in determining health risk.

The “dose” depends on both the concentration of the substance(s) and the duration of exposure to it. The risks are higher if exposure to a fixed concentration occurs over a longer period. According to the Office of Environmental Health Hazard Assessment ([OEHHA](#)), health risk assessments, should be based on a 70- or 30-year exposure period; however, use of off-road heavy-duty diesel equipment would be limited to the periods of construction, which would be during the construction season (approximately May 1 to October 15) and only for a 11-month period.

Also important to consider is the proximity of nearby sensitive receptors. Studies show that DPM disperses rapidly (e.g., DPM concentrations decrease by 70 percent at 500 feet from the source), and receptors must be in close proximity to emission sources in order to be exposed to concentrations of concern. In most cases, receptors around the Project site would be 120 feet or more from the nearest construction activities. (There is vacant, residentially zoned land adjacent to a portion of the northern Project boundary but it is not anticipated to be developed until after construction of the discount warehouse phase of the proposed Project. The timing of project construction would be in advance of any future homes at this site north of the Project site.) Given the locations of potential receptors relative to potential DPM emission sources and the temporary nature of construction activities, the concentrations and durations of any TAC exposure that might occur would be very limited.

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Furthermore, as part of their *Peer Review of Health Risk Assessment*, Ramboll Group (Ramboll) conducted a screening construction HRA which included on-site construction of the Project, and off-site street and ramp improvements. The Ramboll peer review is included in Appendix 4.2-2. The construction emissions analysis reflected Mitigation Measure AQ-1 above, which requires the use of construction equipment that would meet Tier 3 or Tier 4 engine standards for both the on-site construction and off-site street improvements. According to the screening level construction HRA, the incremental cancer risk to off-site residents from exposure to construction-related DPM emission would be 6.1 in a million, which is less than the OEHHA significance threshold of 10 in a million.

Therefore, considering the relatively low mass of DPM emissions that would be generated during even the most intense season of construction, the relatively short duration of construction activities seasonally and overall, the distance to the nearest off-site sensitive receptors, and the highly dispersive properties of DPM, construction-related TAC emissions would not expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in one million or a hazard index greater than 1.0. Additionally, Ramboll's screening construction HRA determined the incremental cancer risks from construction emissions were below the OEHHA significance threshold. Therefore, this impact would be less than significant with mitigation incorporated.

**Significance Without Mitigation:** Potentially significant.

### Mitigation Measure

Implementation of Mitigation Measure AQ-1

Implementation of Mitigation Measure AQ-1 requires the use of Tier 3 and Tier 4 construction equipment. The modelling conducted for the proposed project shows that the use of Tier 3 and Tier 4 construction equipment will ensure that the health risk will be below the 10 per million threshold as shown in Table 4.2-2.

**Significance With Mitigation:** Less than significant.

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| <b>AQ-6</b> | <b>Project implementation would not expose sensitive receptors to substantial toxic air contaminant concentrations during proposed Project operations. [Less Than Significant]</b> |
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The proposed Project would be a source of gasoline vapors that would include TACs such as benzene, methyl tertiary-butyl ether, toluene, and xylene. Benzene is the primary TAC associated with gas stations. Additionally, DPM emissions would be emitted from diesel-fueled trucks traveling along the designated delivery truck routes for the Costco warehouse and major retail buildings, and emitted from trucks idling at loading docks and truck bays. The Project would emit TACs within 350 feet of existing residences to the northeast and northwest and within 100 feet of the future residences that could be developed on the parcel north of the Project site. A full quantitative Health Risk Assessment (HRA) was prepared for the

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Project and is provided in Appendix 4.2-2. The methodology used in this HRA is consistent with the most recent OEHHA guidance documents.<sup>10</sup>

The HRA evaluated the projected truck volumes, number equipped with transport refrigeration units (TRUs), and gasoline throughput provided by the City and applicant. To account for the emission standards representative of the California vehicle fleet, CARB has developed the EMFAC2014 emission factor model. EMFAC2014 was used to identify pollutant emission rates for DPM for Heavy-Heavy Duty Trucks and Medium-Heavy Duty Trucks.<sup>11</sup> The EPA AERMOD air dispersion modeling program and CARB's Hotspots Analysis and Reporting Program (HARP2) Risk Assessment Standalone Tool<sup>12</sup> were used to estimate excess lifetime cancer risks and chronic and acute noncancer hazard indices at the nearest sensitive receptors. Additionally, as part of their *Peer Review of Health Risk Assessment*, Ramboll Group (Ramboll) conducted a screening-level HRA analysis to evaluate health risks from diesel trucks traveling between the project site and highway on/off-ramps.

The results of the operational HRA, including off-site truck emissions, are provided in Table 4.2-8.

**TABLE 4.2-8 OPERATIONAL HEALTH RISK ASSESSMENT RESULTS**

| Receptor                             | Cancer Risk<br>(per million) <sup>a</sup> | Chronic<br>Hazard Index | Acute<br>Hazard Index |
|--------------------------------------|---|-------------------------|-----------------------|
| Existing Residences                  | 2.0                                       | 0.003                   | 0.052                 |
| Vacant Residential Land <sup>b</sup> | 2.2                                       | 0.008                   | 0.067                 |
| AQMD Threshold                       | 10  | 1.0                     | 1.0                   |
| <b>Exceeds Threshold?</b>            | <b>No</b>                                 | <b>No</b>               | <b>No</b>             |

a. OEHHA (2015) recommends that a 30-year (high end residency time) exposure duration be used to estimate individual cancer risk for the maximum exposed receptor. The cancer risks for the maximum lifetime (70-year) and average residency (9-year) exposure durations are provided for informational purposes. For the maximum exposed existing residential receptor, the 70-year and 9-year cancer risks were calculated as 0.8 in a million and 0.5 in a million, respectively. For the maximum exposed future residential receptor, the 70-year and 9-year cancer risks were calculated as 2.2 in a million and 1.3 in a million, respectively. (from on-site project emissions only)

b. Assumed development based on existing general plan designation and zoning of the Not A Part property north of the proposed Project as shown in Figure 3-7 of this EIR.

Source: Ramboll, 2019. *Peer Review of Health Risk Assessment, City of Redding River Crossing Marketplace Specific Plan*, dated March 21, 2019. Included as Appendix 4.2-2 to this Draft EIR.

The incremental cancer risk for the residential Maximum Exposed Receptor (MER) based on the maximum ground level concentration for a 30-year, 24-hour outdoor exposure duration is 2.0 in a million for existing residences and 2.2 for future residences north of the Project site. Carcinogenic risks do not exceed the threshold value of 10 in a million for residents in the vicinity of the Project. For noncarcinogenic effects, the chronic and acute hazard indices identified for each toxicological endpoint were less than one for existing and future residences. Therefore, chronic and acute noncarcinogenic hazards are below the significance thresholds. Consequently, the proposed Project would not expose sensitive receptors to

<sup>10</sup> Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments*.

<sup>11</sup> California Air Resources Board (CARB), 2014. EMFAC2014: Calculating Emission Inventories for Vehicles in California.

<sup>12</sup> California Air Resources Board (CARB), 2017. Hotspots Analysis and Report Program (HARP2). Risk Assessment Standalone Tool (RAST), Version 17023.

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substantial concentrations of air pollutant emissions during operation, and impacts would be less than significant.

**Significance Without Mitigation:** Less than significant.

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| <b>AQ-7</b> | <b>Implementation of the proposed Project would not expose a substantial number of people to objectionable odors during construction or operations. [Less Than Significant]</b> |
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Typically, odors are regarded as an annoyance rather than a health hazard. However, a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory, and respiratory effects, nausea, vomiting, and headache).

The human nose is the sole sensing device for odors, and the ability to detect odors varies considerably and overall is quite subjective. An odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of "odor fatigue," where a person becomes desensitized to a pervasive odor until its intensity changes.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Equipment exhaust and paving activities would result in odor emissions for the proposed Project. Odors would be localized and generally confined to the construction area. The proposed Project would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Therefore, under CEQA, construction odors would result in a less-than-significant impact related to odor emissions.

In terms of operations, land uses commonly considered to be potential sources of odorous emissions include wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants. The proposed Project does not include any of these odorous uses. However, the ability to detect odors varies considerably among the population and is inherently subjective in nature. For instance, gasoline vapors from the gas station component of the proposed Project could be considered unpleasant to some; however, the State of California has stringent requirements for the control of gasoline vapor emissions from gasoline-dispensing facilities. For instance, CARB-certified Phase I and Phase II vapor recovery systems are required. Vapor recovery systems collect gasoline vapors that



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would otherwise escape into the air during bulk fuel delivery (Phase I) or fuel storage and vehicle refueling (Phase II). Phase I vapor recovery system components include the couplers that connect tanker trucks to the underground tanks, spill containment drain valves, overfill prevention devices, and vent pressure/vacuum valves. Phase II vapor recovery system components include gasoline dispensers, nozzles, piping, break away hoses, face plates, vapor processors, and system monitors. Additionally, CARB requires fuel storage tanks to be equipped with a permanent submerged fill pipe tank that prevents the escape of gasoline vapors. Such requirements ensure that minimal vapor and the associated odors are released into the atmosphere.

Similarly, the proposed Project would allow for fast-food or other sit-down restaurants, which are potential sources of odors that may affect certain people. Cooking odors (molecules) generated by the combustion of animal and vegetable matter result in a complex mixture of reactive odorous gases. A small percentage of these odors may be absorbed by the grease particles, but the vast majority exists separately in the airstream. Additionally, grease trap interceptors would be installed where a significant quantity of fats, oils, and grease (FOG) enters the waste water stream (i.e., fast food restaurants). Grease traps are passive devices designed to collect the FOG for removal by pumping the tank. The grease layer builds and forms a “grease cap.” Due to a high content of FOG with limited other nutrients and bacteria, the grease cap quickly putrefies and becomes rancid. A very high level of fatty acids is produced, contributing to a lowering of the pH in the trap. A low pH environment allows odor-producing bacteria to flourish.

The two common methods of abating odor from cooking are (1) the use of an odor oxidant (potassium permanganate), which oxidizes the molecules to solids and then retains them, and (2) a spray odor neutralizer system. Either of these types of odor control can remove 85 to 90 percent of the molecules, depending on the type of cooking. However, determining the efficiency of odor control is subjective, as testing is usually conducted by people rather than machines.

The restaurant uses would be required to comply with all state regulations associated with cooking equipment and controls, such as grease filtration and removal systems, exhaust hood systems, and blowers to move air into the hood systems, through air cleaning equipment, and then outdoors. Proposed Project uses would be equipped with kitchen exhaust systems and pollution/odor control systems. Pollution/odor control systems typically include smoke control, odor control, and exhaust fan sections. Such equipment would ensure that pollutants associated with smoke and exhaust from cooking surfaces would be captured and filtered, allowing only filtered air to be released into the atmosphere. Grease trap maintenance is very important for odor control in restaurants. Common grease trap maintenance includes routine cleaning using high pressure washing, pumping the trap out, and using non-toxic, natural odor control products and vapor barriers.

In addition, the proposed Project would have waste receptacles throughout and would use outdoor trash dumpsters with plastic flip-top lids, which would be stored in an enclosed area and picked up no less than weekly during normal solid waste collection operating hours. The garbage collected on-site, and stored in the outdoor dumpsters, would typically not be on-site long enough to cause substantial odors. The outdoor, enclosed, and covered trash dumpsters, which would be picked up weekly, or more often if requested by the user, would be considered proper containment and handling of the trash generated on-site.

For these reasons, odors associated with the proposed Project would be less than significant.

## AIR QUALITY

Significance Without Mitigation: Less than significant.

### 4.2.4 CUMULATIVE IMPACTS

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|             |  |
|-------------|--|
| <b>AQ-8</b> | <b>Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). [Significant and Unavoidable]</b> |
|-------------|--|

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The cumulative setting for air quality is the NSVAB, which consists of Sutter, Yuba, Colusa, Butte, Glenn, Tehama, and Shasta counties. The Shasta County portion of the NSVAB is designated a nonattainment area for ozone and PM<sub>10</sub> state standards. It is unclassified and/or attainment for all pollutants under federal standards. Cumulative growth in population, vehicle use, and industrial activity could inhibit efforts to improve regional air quality and attain the ambient air quality standards.

The *2015 Air Quality Attainment Plan* is the most recent air quality planning document covering the NSVAB. Air quality attainment plans are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls describing how the state will attain ambient air quality standards. State law makes CARB the lead agency for all purposes related to the *Air Quality Attainment Plan*. Local air districts prepare air quality attainment plans and submit them to CARB for review and approval. The *2015 Air Quality Attainment Plan* includes forecast ROG and NO<sub>x</sub> emissions (ozone precursors) for the entire NSVAB through the year 2020.

Since it is the intent of the *2015 Air Quality Attainment Plan* to achieve ozone attainment status for the NSVAB, the proposed Project would conflict with implementation of the *2015 Air Quality Attainment Plan* by resulting in an increase of ozone precursor emissions beyond that anticipated. Project conflicts with the *2015 Air Quality Attainment Plan* equate to cumulative air quality impacts since the *Air Quality Attainment Plan* addresses air quality in the NSVAB. The consistency of the proposed Project with the *2015 Air Quality Attainment Plan* is determined by its consistency with air pollutant emission projections in the plan. As described in Impact AQ-1, the proposed Project would conflict with implementation of the *2015 Air Quality Attainment Plan* by resulting in an increase of ozone precursor emissions beyond that anticipated, as well as by exceeding daily significance thresholds of the ozone precursor, NO<sub>x</sub>.

The *2015 Air Quality Attainment Plan* does not address PM<sub>10</sub>. Because of the region's nonattainment status for PM<sub>10</sub>, if a project generates this pollutant in quantities that would be considered to result in significant air quality impacts under individual project conditions, the project's cumulative impacts would be considered significant as well. As shown in Tables 4.2-6 and 4.2-7, the proposed Project's PM<sub>10</sub> emissions do not surpass SCAQMD thresholds for construction or operations.

While the proposed Project would not result in a cumulative air quality impact associated with PM<sub>10</sub>, project conflicts with the *2015 Air Quality Attainment Plan* equate to cumulative ozone precursor impacts since the *Air Quality Attainment Plan* addresses ozone precursor pollutants in the NSVAB. The proposed

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Project would conflict with implementation of the *2015 Air Quality Attainment Plan* by resulting in an increase of ozone precursor emissions beyond that anticipated. Therefore, impacts are cumulatively significant and unavoidable.

**Significance Without Mitigation:** Significant and unavoidable.

## **AIR QUALITY**

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## **4.6 GREENHOUSE GASES**

This section describes the regulatory framework and existing conditions on the Project site related to greenhouse gases (GHGs), and the potential GHG impacts of the Project. GHG emissions modeling results are provided in Appendix 4.6-1 to this DEIR.

### **4.6.1 ENVIRONMENTAL SETTING**

#### **4.6.1.1 REGULATORY FRAMEWORK**

##### **State Regulations**

###### *Executive Order S-1-07*

Executive Order S-01-07 (2007) requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California. The regulation took effect in 2010 and is codified at Title 17, California Code of Regulations, Sections 95480 to 95490. The low carbon fuel standard will reduce greenhouse gas (GHG) emissions by reducing the carbon intensity of transportation fuels used in California by at least 10 percent by 2020.

###### *Executive Order S-3-05*

Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order (EO) directed the secretary of the California Environmental Protection Agency to coordinate a multiagency effort to reduce GHG emissions to the target levels. The secretary would also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of California Environmental Protection Agency (CalEPA) created the California Climate Action Team, made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through state incentive and regulatory programs.

###### *Executive Order B-30-15 (2015)*

EO B-30-15 established a medium-term goal for 2030 of reducing GHG emissions by 40 percent below 1990 levels and requires the California Air Resources Board (CARB) to update its current AB 32 Scoping

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Plan to identify the measures to meet the 2030 target. The EO supports EO S-03-05, described above, but is currently only binding on state agencies.

### *Assembly Bill 1493*

Assembly Bill (AB) 1493 (“the Pavley Standard”) (Health and Safety Code Sections 42823 and 43018.5) aims to reduce GHG emissions from noncommercial passenger vehicles and light-duty trucks of model years 2009–2016 by achieving “the maximum feasible reduction of GHG emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State.” To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California’s existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961, and adoption of 13 CCR Section 1961.1 require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars and some light-duty trucks and medium-duty vehicles, beginning with the 2009 model year. Emissions limits are reduced further in each model. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent less CO<sub>2</sub>e (carbon-dioxide equivalent) emissions and 75 percent less smog-forming emissions than in 2009.

### *Senate Bill 375*

Senate Bill (SB) 375<sup>1</sup> (codified in the Government Code 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588, 14522.1, 14522.2, and 65080.01, as well as at Public Resources Code Sections 21061.3 and 21159.28 and Chapter 4.2.) took effect in 2008 and provides a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. Senate Bill (SB) 375 requires metropolitan planning organizations to incorporate a Sustainable Communities Strategy in their Regional Transportation Plans that will achieve GHG emissions reduction targets by reducing vehicle miles traveled from light-duty vehicles through the development of more compact, complete, and efficient communities.

### *Renewables Portfolio Standard (Senate Bill X1-2 and Senate Bill 350)*

California’s Renewables Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. The 33 percent standard (which added Section 705 to the Fish and Game Code; amended Sections 25740, 25740.5, 25741, 25742, 25746, 25747, 25751 of the Public Resources Code, added Section 25519.5 and added Article 11 (commencing with Section 910) to Chapter 4 of Part 1 of Division 1 to the Public Resources Code, and added and repealed Section 25741.5 of the Public Resources Code, amended Sections 399.11, 399.12, 399.20, and 454.5 of the Public Utilities Code, amended, renumbered, and

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<sup>1</sup> Government Code Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588, 14522.1, 14522.2, and 65080.01; Public Resources Code Sections 21061.3 and 21159.28 and Chapter 4.2.

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added Sections 399.13 and 399.16 of the Public Utilities Code, added Sections 399.18, 399.19, 399.26, 399.30, 399.31, and 1005.1 to the Public Utilities Code, repealed Section 387 of the Public Utilities Code, and repealed and added Sections 399.14, 399.15, and 399.17 of the Public Utilities Code) is consistent with the RPS goal established in the Scoping Plan. The passage of Senate Bill 350 in 2015 (which added Section 44258.5 to the Health and Safety Code, amended Section 1720 of the Labor Code, amended Sections 25310 and 25943 of the Public Resources Code, added Sections 25302.2 and 25327 to the Public Resources Code, amended Sections 359, 399.4, 399.11, 399.12, 399.13, 399.15, 399.16, 399.18, 399.21, 399.30, 454.55, 454.56, 701.1, 740.8, 9505, and 9620 of the Public Utilities Code, amended and repealed Sections 337 and 352 of the Public Utilities Code, added Sections 237.5, 365.2, 366.3, 454.51, 454.52, 740.12, 9621, 9622, Article 17 (commencing with Section 400) to Chapter 2.3 of Part 1 of Division 1 to the Public Utilities Code, added and repealed Article 5.5 (commencing with Section 359.5) of Chapter 2.3 of Part 1 of Division 1 of the Public Resources Code, and repealed Article 5 (commencing with Section 359) of Chapter 2.3 of Part 1 of Division 1 of the Public Utilities Code) updates the RPS to require the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. The bill would make other revisions to the RPS program and to certain other requirements on public utilities and publicly owned electric utilities.

*California Building Energy Efficiency Standards*

In general, the California Building Energy Efficiency Standards require the design of building shells and building components to conserve energy. The California Energy Commission adopted changes to the 2013 Building Energy Efficiency Standards in 24 CCR Part 6 (also known as the California Energy Code) and associated administrative regulations in Part 1.<sup>2</sup> The 2016 Building Energy Efficiency Standards are 28 percent more efficient than previous standards for residential construction and 5 percent more efficient for nonresidential construction. The standards require better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. Energy-efficient buildings reduce fossil fuel consumption and decrease GHG emissions.

*California Green Building Standards*

The California Green Building Standards Code (24 CCR Part 11), or CALGreen, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures in planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures.

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<sup>2</sup> California Energy Commission, June 2015, <http://www.energy.ca.gov/2015publications/CEC-400-2015-037/CEC-400-2015-037-CMF.pdf>, accessed October 19, 2017.

## **GREENHOUSE GASES**

### *Assembly Bill 32 (California Global Warming Solutions Act of 2006)*

The primary acts that have driven GHG regulation and analysis in California include the California Global Warming Solutions Act of 2006 (California Health and Safety Code, Division 25.5, Sections 38500 to 38599), which instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. AB 32 directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. The bill set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner. The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020.

### *CARB Scoping Plan*

On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies California will implement to reduce CO<sub>2</sub>e emissions by 174 million metric tons (MMT), or approximately 30 percent, from the state's projected 2020 emissions level of 596 MMTCO<sub>2</sub>e under a business as usual (BAU) scenario. This is a reduction of 42 MMTCO<sub>2</sub>e, or almost 10 percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.

CARB's Scoping Plan calculates 2020 BAU emissions as the emissions that would be expected in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. At the time CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available.

AB 32 requires CARB to update the Scoping Plan at least once every five years. The Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG reduction necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. The Scoping Plan update also looks beyond 2020 toward the 2050 goal established in Executive Order S-3-05, though not yet adopted as state law, and observes that "a mid-term statewide emission limit will ensure that the state stays on course to meet our long-term goal." The Scoping Plan update does not establish or propose any specific post-2020 goals, but identifies such goals adopted by other governments or recommended by various scientific and policy organizations.

### *Amendments to California Global Warming Solutions Act of 2006: Emission Limit (Senate Bill 32)*



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Signed into law in September 2016, SB 32 codifies the 2030 target in the recent Executive Order B-30-15. The bill authorizes the state board to adopt an interim GHG emissions level target to be achieved by 2030. SB 32 states that the intent is for the legislature and appropriate agencies to adopt complementary policies which ensure that the long-term emissions reductions advance specified criteria. CARB is tasked with updating the Scoping Plan to provide guidance for compliance with SB 32. The next updated Scoping Plan is expected to be adopted by the end of 2017.

SB 32 codified a GHG reduction target of 40 percent below 1990 levels by 2030, and, as previously discussed, EO S-3-05 established a long-term goal of reducing statewide GHG emissions to 80 percent below 1990 levels by 2050. Achieving these long-term GHG reduction policies will require systemic changes in how energy is produced and used.

There are a number of studies that discuss potential mechanisms for limiting statewide GHG emissions to meet the aggressive goals identified by SB 32 and EO S-3-05. In general, these studies reach similar conclusions—deep reductions in GHG emissions can *only* be achieved with significant changes in electricity production, transportation fuels, and industrial processes (e.g., decarbonizing electricity production, electrifying transportation, utilizing alternative fuels for aviation).

The systemic changes that will be required to achieve SB 32 and the goals of EO S-3-05 include significant policy, technical, and economic solutions. Some changes, such as the use of alternative fuels (e.g., biofuel) to replace petroleum for aviation, cannot be accomplished without action by the federal government. Similarly, achieving the reduction goals will require California to dramatically increase the amount of electricity that is generated by renewable generation sources and, correspondingly, advance the deployment of energy storage technology and smart-grid strategies, such as price-responsive demand and the smart charging of vehicles. This would entail a significant redesign of California's electricity system, which can only be accomplished through state action. Accordingly, in evaluating the Project's emissions for consistency with SB 32 and EO S-3-05, it is important to note that many of the broad-scale shifts needed to meet the reduction goals are outside of the control of the City and beyond the scope of the Project.

The long-term climate change policy and regulatory changes that will be enacted to meet post-2020 emissions reduction targets are unknown at this time. As a consequence, the extent to which the Project's emissions and resulting impacts would be mitigated through implementation of statewide (and nationwide) changes is not known.

**Regional Regulations****Shasta Regional Transportation Agency Regional Transportation Plan / Sustainable Communities Strategy**

In 2018, the Shasta Regional Transportation Agency (SRTA) adopted the 2018 Regional Transportation Plan/ Sustainable Communities Strategy (2018 RTP/SCS). The 2018 RTP/SCS charts a course for closely

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integrating land use and transportation so that the region can grow smartly and sustainably. The 2018 RTP/SCS is a long-range visioning plan to encourage and promote the safe and efficient management, operation, and development of a regional intermodal transportation system that, when linked with appropriate land use planning, will serve the mobility needs of goods and people. The RTP/SCS is required to meet the region's GHG emissions reduction targets, established by CARB for the years 2020 and 2035. Currently, SRTA's is tasked by CARB to achieve a 4 percent reduction in mobile-source GHG emissions compared to 2005 vehicle emissions in 2020 and 2035.

### Shasta Regional Climate Action Plan

In 2010, the Shasta County Air Quality Management District (SCAQMD) initiated the regional climate action planning (RCAP) process. The primary objectives of the RCAP process are to contribute to the State's climate protection efforts and to provide CEQA review streamlining benefits for development projects in the region's four jurisdictions: the City of Anderson, the City of Redding, the City of Shasta Lake, and the unincorporated areas of Shasta County. To facilitate these objectives, the SCAQMD worked with the four jurisdictions to prepare community-specific, independent climate action plans that contain GHG emission inventories and forecasts, emission reduction measures, and implementation and monitoring programs. The RCAP document serves as a collection of the individual climate action plans and demonstrates the region's commitment to the State's GHG reduction efforts (Shasta County 2012). It should be noted that neither Shasta County or the City of Redding adopted their respective components of the RCAP. The discussion is included in this document to only demonstrate those project components that would be consistent with the RCAP should the draft document be adopted in the future.

### City of Redding General Plan

The City of Redding General Plan serves as a long-term policy guide for physical, economic, and environmental growth. It is a statement of the community's vision for ultimate growth. State law requires that every City prepare and adopt a comprehensive long-range plan to serve as a guide for the development of the community. City actions, such as those relating to land use allocations, annexations, zoning, subdivision and design review, redevelopment and capital improvements must be consistent with the General Plan. The General Plan contains several policy provisions that reduce GHG emissions associated with land use development.

## **4.6.1.2 EXISTING CONDITIONS**

### **Climate and Meteorology**

The proposed Project is located at the northern end of the Northern Sacramento Valley Air Basin (NSVAB). Prevailing winds in the area are from the south and southwest. Sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas. Growth and urbanization in Shasta County have also contributed to an increase in emissions.

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## Global Climate Change—Greenhouse Gases

The natural process through which heat is retained in the troposphere is called the “greenhouse effect.” The greenhouse effect traps heat in the troposphere through a threefold process: short wave radiation emitted by the sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave radiation; and GHGs in the upper atmosphere absorb this long wave radiation and emit it into space and toward the Earth. This “trapping” of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and CO<sub>2</sub>. Many other trace gases have greater ability to absorb and reradiate long wave radiation, but these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a global warming potential (GWP) for each GHG based on its ability to absorb and reradiate long wave radiation. Table 4.6-1 describes the most common GHGs associated with development similar to the proposed Project.

**TABLE 4.6-1** COMMON GREENHOUSE GASES

| GHG                               | GWP | Description   |
|-----------------------------------|-----|---|
| Water Vapor (H <sub>2</sub> O)    | n/a | Water is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers and transpiration from plants contribute 90 percent and 10 percent of the water vapor in our atmosphere respectively. The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than 1 percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change has not determined a GWP for water vapor. |
| Carbon Dioxide (CO <sub>2</sub> ) | 1   | Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Carbon dioxide is the most widely emitted GHG and is the reference gas for determining GWPs for other GHGs.   |
| Methane (CH <sub>4</sub> )        | 25  | Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and animal digestion. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation.   |
| Nitrous Oxide (N <sub>2</sub> O)  | 298 | Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic and nitric acid production.  |

Source: California Air Resources Board, 2014a.

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural emissions sectors. California is a significant emitter of CO<sub>2</sub>e in the world and produced 459

## GREENHOUSE GASES

million gross metric tons of CO<sub>2</sub>e in 2012. In the state, the transportation sector is the largest emitter of GHGs, followed by electricity generation.<sup>3</sup>

### Effects of Climate Change on the Environment

The Intergovernmental Panel on Climate Change was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to provide the world with a scientific view on climate change and its potential effects. According to the Panel, global average temperature is expected to increase from the 1986–2005 period by 0.3 to 4.8 degrees Celsius (°C) (0.5–8.6 °F) by the end of the 21st century, depending on future GHG emission scenarios.<sup>4</sup> According to the California Natural Resources Agency, temperatures in California are projected to increase 2.7°F above 2000 averages by 2050 and, depending on emission levels, 4.1 to 8.6°F by 2100.<sup>5</sup>

Physical conditions other than average temperatures could also be affected by the accumulation of GHG emissions. For example, changes in weather patterns resulting from increases in global average temperature are expected to result in less precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. Based upon historical data and modeling, the California Department of Water Resources projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historical average by 2050.<sup>6</sup> An increase in precipitation falling as rain rather than snow could also lead to increased potential for floods, because water that would normally be held in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storms. This scenario puts more pressure on California's dam, levee, and flood control system.

As the existing climate throughout California changes, the ranges of various plant and wildlife species could shift or shrink, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or extirpated from the state.

Changes in precipitation patterns and increased temperatures are expected to alter the distribution and character of natural vegetation and associated moisture content of plants and soils. An increase in frequency of extreme heat events and drought are also expected. These changes are expected to lead to increased frequency and intensity of large wildfires.

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<sup>3</sup> California Air Resources Board, 2014a. *California Greenhouse Gas Inventory for 2000–2012*.

<sup>4</sup> Intergovernmental Panel on Climate Change (IPCC), 2014. *Climate Change 2014 Synthesis Report: Approved Summary for Policymakers*.

<sup>5</sup> California Natural Resources Agency (CNRA), 2012. *Our Changing Climate: Vulnerability & Adaptation to the Increasing Risks of Climate Change in California*.

<sup>6</sup> California Department of Water Resources, 2008. *Managing an Uncertain Future: Climate Change Adaptation Strategies for California's Water*.

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## Determining Significance Thresholds

Addressing GHG impacts requires an agency to make a determination as to what constitutes a significant impact. The amendments to the CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions will have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the Project's GHG emissions (14 CCR Section 15064.4[a]).

A number of expert agencies throughout the state have drafted or adopted varying threshold approaches and guidelines for analyzing 2020 operational GHG emissions in CEQA documents. The different thresholds include (1) compliance with a qualified GHG reduction strategy, (2) performance-based reductions, (3) numeric "bright line" thresholds, and (4) efficiency-based thresholds. The California Supreme Court decision in the *Centers for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company* (November 30, 2015, Case No. S217763) (hereafter *Newhall Ranch*) confirmed that when an "agency chooses to rely completely on a single quantitative method to justify a no-significance finding, CEQA demands the agency research and document the quantitative parameters essential to that method."

Efficiency-based thresholds represent the rate of emission reductions needed to achieve a fair share of California's GHG emissions reduction target established under AB 32. Efficiency-based thresholds are typically calculated by dividing emissions associated with residential and commercial uses (also called the "land use sector") in the state by the sum of jobs and residents. (The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors—e.g., transportation, electrical power, commercial and residential/land use, industrial, etc.). The sum of jobs and residents is called the "service population," and a project's service population is defined as the people that work, study, live, and congregate on the Project site. Therefore, for the purposes of this analysis, the proposed Project is compared to an efficiency-based significance threshold.

The *Newhall Ranch* decision did not comment on use of an efficiency-based threshold for analyzing project-level GHG emissions. However, U.S. Supreme Court rulings establish that the U.S. Constitution limits exactions on new development to those having a "nexus" and "rough proportionality" to the impact actually caused by the new development. While there is a nexus for requiring GHG reductions for new development that results in new GHG emissions, the reductions mandated must be proportional to the impact caused by new development. Requiring new development to meet the average statewide GHG efficiency is a proportional measure, but requiring more than average levels of efficiency would be mitigating existing conditions beyond the impact associated with a proposed development. A requirement to mitigate beyond a project's impact would be in conflict with CEQA. Using the efficiency-based standard, it is possible to directly compare a proposed Project's GHG to the State plan to determine compliance. As

## GREENHOUSE GASES

~~the adopted state plan is presumed to be adequate to meet the GHG reduction goals of AB 32, if a project is consistent with the plan it is also consistent with the GHG reduction goals of AB 32.~~

### ~~Year 2020 Threshold Calculation~~

~~An efficiency based threshold consistent with AB 32 can be calculated based on the 1990 statewide land use inventory of 264.1 MMT<sup>2</sup> and the projected 2020 population of 40.6 million<sup>3</sup> plus projected employment of 16.9 million,<sup>4</sup> as shown in the following equation:~~

$$\text{Year 2020 Threshold} = \frac{264.1 \text{ million metric tons [1990 Inventory]}}{40.6 \text{ million population} + 16.9 \text{ million jobs}}$$

~~Since the land use sector inventory only includes residential and commercial emission sources, industrial, marine vessels, aviation, and other emission sources not applicable to land use developments are not included as part of the Project efficiency based threshold. Based on the statewide land use sector inventory, land use development projects such as the proposed Project must achieve an average emissions efficiency of 4.5 metric tons (MT) CO<sub>2</sub>e/SP (per service population) to be consistent with the California's GHG emissions reduction target established under AB 32.~~

~~The *Newhall Ranch* decision also identified the need to analyze both year 2020 and post-2020 emissions, as applicable, stating that an "EIR taking a goal consistency approach to CEQA significance may in the near future need to consider the project's effects on meeting longer term emissions reduction targets." The recent *Cleveland National Forest Foundation v. San Diego Association of Governments* Supreme Court decision has affirmed this requirement. SB 32 codifies the 2030 target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes the state board to adopt an interim GHG emissions level target to be achieved by 2030. SB 32 states that the intent is for the legislature and appropriate agencies to adopt complementary policies which ensure that the long term emissions reductions advance specified criteria. Furthermore, while not legally binding on local land use agencies, EO S-03-05 has set forth a long term reduction target to reduce GHG emissions by 80 percent below 1990 levels by 2050. "At the time of writing this analysis, however, no specific policies or emissions reduction mechanisms have been established.~~

~~The Association of Environmental Professionals' Climate Change Committee recommended that CEQA analyses for most land use development projects can continue to rely on current thresholds for the immediate future, but that long term projects should consider "post-2020 emissions consistent with~~

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<sup>2</sup> County of San Diego, 2013. *Guidelines for Determining Significance and Report Format and Content Requirements Climate Change*, November.

<sup>3</sup> California Department of Finance (CDOF), 2017. *Total Population Projections for California and Counties: May 1, 2016 to 2060 in 5-year Increments*.

<sup>4</sup> California Economic Forecast (CEF), 2015. *California County-Level Economic Forecast 2015-2040*, September.

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~~‘substantial progress’ along a post-2020 reduction trajectory toward meeting the 2050 target.”<sup>40</sup> The committee further recommends that the “significance determination ... should be based on consistency with ‘substantial progress’ along a post-2020 trajectory.” Accordingly, Project-related impacts in both 2020 and 2035 are considered in this analysis using the efficiency-based threshold concept.~~

### ~~Post-2020 (Substantial Progress) Threshold Calculation~~

~~Similar to the approach taken to analyze 2020 emissions impacts, an efficiency-based threshold consistent with AB 32 can be calculated based on the 132.1 MMT, which is 50 percent below 1990 the statewide land use inventory, and the projected 2035 population of 45.7 million<sup>41</sup> plus projected employment of 19.2 million.<sup>42</sup> Based on the calculations, the Project must achieve an average emissions efficiency of 2.0 MT CO<sub>2</sub>e/SP in the year 2035 to be consistent with the trajectory of long-term GHG reduction goals as identified by SB 32 and EO S-03-05.~~

#### ~~Substantial Progress Efficiency Indicator~~

$$\frac{132.1 \text{ million metric tons [Post-2020 Emissions Goal]}}{45.7 \text{ million population} + 19.2 \text{ million jobs}}$$

### ~~Linear Interpolation Equation~~

~~The inventory goal for the year 2035 is selected because it adequately captures consistency with the goal of SB 32 (statewide GHG reductions of 40 percent below 1990 levels by 2030) as well as the necessary trajectory toward meeting the goal of EO S-03-05 (statewide GHG reductions of 80 percent below 1990 levels by 2050).~~

$$2035 \text{ Inventory Goal} = 2030 \text{ Goal} + (2050 \text{ Goal} - 2030 \text{ Goal}) * \frac{(2035 - 2030)}{(2050 - 2030)}$$

~~2035 Inventory Goal = 50 percent below statewide 1990 land use GHG emissions levels, 132.1 MMT CO<sub>2</sub>e~~

~~2030 Goal = 40 percent below statewide 1990 land use GHG emissions levels, 158.5 MMT CO<sub>2</sub>e (per SB 32)~~

<sup>40</sup> Association of Environmental Professionals’ (AEP) Climate Change Committee, 2015. *Beyond 2020: The Challenges of Greenhouse Gas Reduction Planning by Local Governments in California (Beyond 2020)*.

<sup>41</sup> California Department of Finance (CDOF), 2017. *Total Population Projections for California and Counties: May 1, 2016 to 2060 in 5-year Increments*.

<sup>42</sup> California Economic Forecast (CEF), 2015. *California County Level Economic Forecast 2015–2040*, September.

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~~2050 Goal – 80 percent below statewide 1990 land use GHG emissions levels, 52.8 MMT CO<sub>2</sub>e (per EO S-03-05)~~

### ~~4.6.2 STANDARDS OF SIGNIFICANCE~~

According to Appendix G of the State CEQA Guidelines, the proposed Project would have a significant impact if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

~~Based on the calculations described in this section, Table 4.6-2 summarizes the assumed thresholds of significance for compliance with state plans for the reduction of GHG.~~

~~TABLE 4.6-2 OPERATIONAL GREENHOUSE GAS THRESHOLDS/SUBSTANTIAL PROGRESS EFFICIENCY INDICATOR~~

| <del>Analysis Condition</del>          | <del>Threshold/Metric</del>          | <del>Basis</del>   |
|--|--------------------------------------|--|
| <del>2020 Development</del>            | <del>4.5 MT CO<sub>2</sub>e/SP</del> | <del>Average Project level efficiency based on AB 32</del>           |
| <del>2035 Development (Buildout)</del> | <del>2.0 MT CO<sub>2</sub>e/SP</del> | <del>50 percent reduction below 1990 land use sector emissions</del> |

Section 15064.4 of the CEQA Guidelines recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project: the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs.

Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)).<sup>13</sup> As a note, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA

<sup>13</sup> See, generally, Section 15130(f); see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, dated April 13, 2009.



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Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project.<sup>14</sup> To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency.<sup>15</sup> Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions."<sup>16</sup> Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.<sup>17</sup>

Neither the City nor the SCAQMD has not established, and does not provide any guidance regarding, significance thresholds for GHG emissions. In the absence of any applicable adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Therefore, the Project will be assessed for consistency with the GHG-reducing provisions promulgated by the State of California, in addition to those contained in the SRTA RTP/SCS, draft Shasta Regional Climate Action Plan, and GHG-reducing provisions of the City of Redding General Plan.

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<sup>14</sup> 14 CCR § 15064(h)(3).

<sup>15</sup> 14 CCR § 15064(h)(3).

<sup>16</sup> 14 CCR § 15064(h)(3).

<sup>17</sup> See, for example, San Joaquin Valley Air Pollution Control District, CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation, APR—2030 (June 25, 2014), in which the SJVAPCD "determined that GHG emissions increases that are covered under ARB's Cap-and-Trade regulation cannot constitute significant increases under CEQA..." Further, the South Coast Air Quality Management District (SCAQMD) has taken this position in CEQA documents it has produced as a lead agency. The SCAQMD has prepared three Negative Declarations and one Draft Environmental Impact Report that demonstrate the SCAQMD has applied its 10,000 MTCO<sub>2</sub>e/yr. significance threshold in such a way that GHG emissions covered by the Cap-and-Trade Program do not constitute emissions that must be measured against the threshold. See: SCAQMD, Final Negative Declaration for: Ultramar Inc. Wilmington Refinery Cogeneration Project, SCH No. 2012041014 (October 2014); SCAQMD, Final Negative Declaration for Phillips 66 Los Angeles Refinery Carson Plant—Crude Oil Storage Capacity Project, SCH No. 2013091029 (December 2014); Final Mitigated Negative Declaration for Toxic Air Contaminant Reduction for Compliance with SCAQMD Rules 1420.1 and 1402 at the Exide Technologies Facility in Vernon, CA, SCH No. 2014101040 (December 2014); and Draft Environmental Impact Report for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project, SCH No. 2014121014 (April 2014).

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### ~~4.6-3~~ 4.6.2 IMPACT DISCUSSION

**GHG-1      Greenhouse gas emissions generated by the Project would not have a significant impact on global climate change in the year 2020 since the Project would be consistent with and would not conflict with applicable greenhouse gas reduction plans, policies, and regulations. [Less than Significant Impact]**

The proposed Project would result in direct and indirect emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O and would not generate other GHGs of sufficient quantity to affect the analysis. Therefore, this analysis focuses on these three forms of GHG emissions. Direct Project-related GHG emissions include emissions from construction activities, area sources, and mobile sources, while indirect sources include emissions from electricity consumption, water demand, and solid waste generation. Project-related GHG emissions were quantified with the California Emissions Estimator Model (CalEEMod). CalEEMod relies upon vehicle trip rates and Project-specific land use data to calculate emissions. The proposed Project would result in approximately 9,160 average daily trips per the River Crossing Marketplace Specific Plan Traffic Impact Analysis Report (refer to Appendix 4.12-1). Table 4.6-23 presents the estimated CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (in the form of MTCO<sub>2</sub>e) of the proposed Project ~~in the year 2020~~. CalEEMod outputs with the GHG emissions data are in Appendix 4.6-1.

**TABLE 4.6-23      ESTIMATED GREENHOUSE GAS EMISSIONS, ~~YEAR 2020~~**

|   | Source  | Total MTCO <sub>2</sub> e |
|---|---|---------------------------|
| <b><u>Direct Emissions</u></b>                | <u>Construction (amortized over 30 years)<sup>1</sup></u> | <del>65</del> 163         |
|   | <u>Area Source (hearths and landscape equipment)</u>      | 0                         |
|   | <u>Mobile Source (automobiles)</u>                        | <del>8,831</del> 591      |
|   | <u>Total Direct Emissions</u>                             | <del>8,896</del> 754      |
| <b><u>Indirect Emissions</u></b>              | <u>Energy (electricity and natural gas consumption)</u>   | <del>920</del> 423        |
|   | <u>Solid Waste (hauling and decomposition)</u>            | 410                       |
|   | <u>Water Demand (water and wastewater conveyance)</u>     | <del>65</del> 62          |
|   | <u>Total Indirect Emissions</u>                           | <del>1,395</del> 895      |
| <b><u>Total Project-Related Emissions</u></b> |   | <del>10,291</del> 954     |

Source: CalEEMod, version 2016.3.1. See Appendix 4.6-1 for emission model outputs.

### **~~Total Project-Related Sources of Greenhouse Gases in 2020~~**

Notes: <sup>1</sup> Construction emissions include the one-time release of CO<sub>2</sub> from the removal of trees on-site, on-site construction, and off-site construction

As depicted in Table 4.6-23, the total amount of unmitigated Project-related GHG emissions from direct and indirect sources combined would total ~~10,291~~9,954 MTCO<sub>2</sub>e/year.

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As noted in the Standards of Significance discussion above, the proposed Project must achieve an average emissions efficiency of 4.5 MT CO<sub>2</sub>e/SP to be considered less than significant.

The majority of people visiting nonresidential land uses would be customers and a smaller number of vendors. In order to estimate the number of customers and vendors who would visit the site, the number of potential Project-related daily vehicle trips is divided by two to account for each service population member making one trip to and one trip from the nonresidential use. This is a conservative assumption since vehicles are assumed to accommodate only one person, whereas many of the vehicles would accommodate more than one person. As cited in the traffic report, the proposed Project would generate approximately 9,160 trips per day (refer to Appendix 4.12-1); therefore, the Project service population is 4,580.

Conclusion

As shown in Table 4.6-4, the calculations yield a metric ton per service population ratio of 2.25. This service population ratio does not exceed the Project level year 2020 emission threshold of 4.5 MT CO<sub>2</sub>e/SP. As calculated for the year 2020, the proposed Project would not impede progress toward the reduction targets of AB 32, and the Project’s cumulative contribution of GHG emissions in 2020 would be less than significant.

TABLE 4.6-4 PROJECT GREENHOUSE GAS EMISSIONS PER SERVICE POPULATION, YEAR 2020

| Per-Capita Emissions                 | Emissions (MTCO <sub>2</sub> e) | Service Population | MTCO <sub>2</sub> e/SP/Year |
|--------------------------------------|---------------------------------|--------------------|-----------------------------|
| Project Buildout                     | 10,294                          | 4,580              | 2.25                        |
| Year 2020 Efficiency-Based Threshold |                                 |                    | 4.5                         |
| Threshold Exceeded?                  |                                 |                    | No                          |

Source: CalEEMod, version 2016.3.1. See Appendix 4.6-1 for emission model outputs.

Significance Without Mitigation: Less than significant.

GHG-2 Greenhouse gas emissions generated by the Project would not have a significant impact on global climate change in the year 2035. [Less Than Significant]

As previously described, the AEP Climate Change Committee recommended that CEQA analyses for most land use development projects can continue to rely on current thresholds for the immediate future, but that long-term projects should consider “post-2020 emissions consistent with ‘substantial progress’ along

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a post-2020 reduction trajectory toward meeting the 2050 target.” The committee further recommends that the “significance determination ... should be based on consistency with ‘substantial progress’ along a post-2020 trajectory.”<sup>48</sup>

Table 4.6-5 presents the estimated CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub> emissions (in the form of MTCO<sub>2</sub>e) of the proposed Project in the year 2035. CalEEMod outputs with the GHG emissions data are in Appendix 4.6-1.

### Total Project-Related Sources of Greenhouse Gases in 2035

As depicted in Table 4.6-5, the total amount of unmitigated Project-related GHG emissions from direct and indirect sources combined would total 8,395 MTCO<sub>2</sub>e/yr. It is important to note that mobile GHG emissions for the year 2035 are much lower than emissions for the year 2020. Emissions have declined in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

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<sup>48</sup> Association of Environmental Professionals’ (AEP) Climate Change Committee, 2015, *Beyond 2020: The Challenges of Greenhouse Gas Reduction Planning by Local Governments in California (Beyond 2020)*.

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**TABLE 4.6-5 ESTIMATED GREENHOUSE GAS EMISSIONS, YEAR 2035**

|  | Source   | Total MTCO <sub>2</sub> e |
|--|--|---------------------------|
| <b>Direct Emissions</b>                | Construction (amortized over 30 years)           | 65                        |
|  | Area Source (hearths and landscape equipment)    | 0                         |
|  | Mobile Source (automobiles)                      | 6,946                     |
|  | <b>Total Direct Emissions</b>                    | <b>7,011</b>              |
| <b>Indirect Emissions</b>              | Energy (electricity and natural gas consumption) | 920                       |
|  | Solid Waste (hauling and decomposition)          | 410                       |
|  | Water Demand (water and wastewater conveyance)   | 54                        |
|  | <b>Total Indirect Emissions</b>                  | <b>1,384</b>              |
| <b>Total Project-Related Emissions</b> |  | <b>8,395</b>              |

Source: CalEEMod, version 2016.3.1. See Appendix 4.6-1 for emission model outputs.

As noted in the Standards of Significance discussion above, the Project must achieve an average emissions efficiency of 2.0 MT CO<sub>2</sub>e/SP to be considered less than significant in the year 2035. As previously described, the Project service population is 4,580. Table 4.6-6, dividing the GHG emissions yields a metric ton per service population ratio of 1.83. This service population ratio is below the year 2035 Project level emission threshold of 2.0 MT CO<sub>2</sub>e/SP, which is derived from the reduction targets of SB 32 and EO S-03-05. Therefore, the Project would not impede progress toward the Post-2020 reduction targets, and the Project's cumulative contribution of GHG emissions would be less than significant in post-2020.

**TABLE 4.6-6 PROJECT GREENHOUSE GAS EMISSIONS PER SERVICE POPULATION, YEAR 2035**

| Per Capita Emissions                 | Emissions | Service Population | MTCO <sub>2</sub> e/SP/Year |
|--------------------------------------|-----------|--------------------|-----------------------------|
| Project Buildout                     | 8,395     | 4,580              | 1.83                        |
| Year 2035 Efficiency-Based Threshold |           |                    | 2.0                         |
| Threshold Exceeded?                  |           |                    | No                          |

Source: CalEEMod, version 2016.3.1. See Appendix 4.6-1 for emission model outputs.

**Significance Without Mitigation:** Less than significant.

**GHG-3 Implementation of the proposed Project would not conflict with an applicable greenhouse gas reduction plan, policy, or regulation. [Less Than Significant]**

The following discussion address the proposed Project's consistency with applicable plans and policies for GHG reduction.

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### *California State Greenhouse Gas Emissions Reduction Strategies*

As previously described, AB 32 directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. This target was achieved in 2016, four years ahead of the target date (CARB 2018). On January 20, 2017, CARB released its proposed 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update), which lays out the framework for achieving the 2030 reductions as established in SB 32 (discussed above). The proposed 2017 Scoping Plan Update identifies the GHG reductions needed by each emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels before 2030. The proposed Project's consistency with statewide GHG reduction strategies is analyzed in detail in **Table 4.6-3**.

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TABLE 4.6-3 CONSISTENCY WITH APPLICABLE STATE GREENHOUSE GAS REDUCTION STRATEGIES

| <u>Sector/Source</u>  | <u>Category Description</u>  | <u>Consistency Analysis</u>   |
|---|--|---|
| <b>Energy</b>   |  |   |
| <u>California Renewables Portfolio Standard and SB 350</u>              | <u>Increases the proportion of electricity from renewable sources to 33 percent renewable power by 2020. SB 350 requires 50 percent by 2030. It also requires the State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation.</u>   | <b>Consistent.</b> The Project would use electricity provided by Redding Electric Utility (REU), which is required to meet the 2020 and 2030 standards. The Project would also meet the applicable requirements from the 2016 CalGreen Building Standards Code related to energy efficiency and conservation.   |
| <u>California Code of Regulations, Title 24</u>                         | <u>Energy Efficiency Standards for Residential and Nonresidential Buildings.</u>   | <b>Consistent.</b> The Project would meet the energy efficiency standards of Title 24.  |
| <u>Assembly Bill 1109</u>   | <u>The Lighting Efficiency and Toxics Reduction Act (AB 1109) prohibits manufacturing specified general purpose lights that contain levels of hazardous substances prohibited by the European Union. AB 1109 also requires a reduction in average statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018.</u> | <b>Consistent.</b> The Project would meet the applicable requirements from Title 24. In addition, the Project would utilize highly efficient LED lighting and LED lamps to provide even light distribution and utilize less energy in indoor and outdoor lighting in parking lots. The lighting would also be controlled by the Project energy management system, which would include Photo sensor and time clock-controlled parking lot and exterior lights. |
| <u>California Green (CalGreen) Building Standards Code Requirements</u> | <u>All bathroom exhaust fans shall be ENERGY STAR compliant.</u>   | <b>Consistent.</b> The Project would utilize energy efficiency appliances and equipment and would meet the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24, 2019 Building Energy Efficiency Standards.  |
|   | <u>Refrigerants used in newly installed HVAC systems shall not contain any CFCs.</u>   | <b>Consistent.</b> The Project would meet this requirement as part of its compliance with the 2016 CalGreen   |

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TABLE 4.6-3 CONSISTENCY WITH APPLICABLE STATE GREENHOUSE GAS REDUCTION STRATEGIES

| <u>Sector/Source</u>  | <u>Category Description</u>   | <u>Consistency Analysis</u>  |
|---|---|--|
|   |   | Building Standards Code.   |
| California Green (CalGreen)<br>Building Standards Code<br>Requirements<br>(Continued) | <u>Parking spaces shall be designed for clean air vehicles (e.g., carpool/vanpool, low-emitting or fuel-efficient vehicles) depending on the number of total parking spaces provided. For projects with over 201 parking spaces, at least eight percent of total parking spaces will be designed for such vehicles.</u> | <b>Consistent.</b> The Project would meet this requirement as part of its compliance with the 2016 CalGreen Building Standards Code. The Project would include parking spaces for clean air vehicles for at least for 8% of total parking spaces. The Project would have 1,117 spaces and would include at least 90 spaces for clean air vehicles.     |
|   | <u>Long-term and short-term bike parking shall be provided for five percent of vehicle parking spaces with a minimum of one two-bike capacity rack.</u>   | <b>Consistent.</b> The Project would meet this requirement as part of its compliance with the 2016 CalGreen Building Standards Code. The Project would include short-term and long-term bike parking for 5% of total vehicle parking spaces. The Project would have 1,100 vehicle parking spaces and would include at least 55 bicycle parking spaces. |
|   | <u>Include a stormwater soil loss prevention plan through a local ordinance such as with a Stormwater Pollution Prevention Plan (SWPPP) or an effective combination of erosion and sediment control and good housekeeping best management practices.</u>  | <b>Consistent.</b> The Project would meet this requirement as part of its compliance with the Construction General Permit, Order No. 2012-0006-DWQ, which requires a SWPPP.  |
|   | <u>All irrigation controllers must be installed with weather sensing or soil moisture sensors.</u>  | <b>Consistent.</b> The Project would meet this requirement as part of its compliance with the 2016 CalGreen Building Standards Code.   |
|   | <u>Requires a minimum of 65 percent recycle or salvaged for reuse of nonhazardous construction and demolition debris or meet a local construction and demolition waste management ordinance, whichever is more stringent.</u>   | <b>Consistent.</b> The Project would meet this requirement as part of its compliance with the 2016 CalGreen Building Standards Code by recycling and salvaging for reuse at least 65% of nonhazardous construction debris.   |



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TABLE 4.6-3 CONSISTENCY WITH APPLICABLE STATE GREENHOUSE GAS REDUCTION STRATEGIES

| <u>Sector/Source</u>                                      | <u>Category Description</u>   | <u>Consistency Analysis</u>  |
|---|---|--|
|   | <u>Requires documentation of types of waste recycled, diverted or reused.</u>   | <b>Consistent.</b> The Project would meet this requirement as part of its compliance with the 2016 CalGreen Building Standards Code.   |
| <b>Mobile Sources</b>                                     |   |  |
| <u>AB 1493 (Pavley Regulations)</u>                       | <u>Reduces GHG emissions in new passenger vehicles from model year 2012 through 2016 (Phase I) and model years 2017–2025 (Phase II). Also reduces gasoline consumption to a rate of 31 percent of 1990 gasoline consumption (and associated GHG emissions) by 2020.</u>   | <b>Consistent.</b> The Project would be consistent with this regulation as all members' vehicles would be subject to this standard and would not conflict with implementation of the vehicle emissions standards.  |
| <u>Low Carbon Fuel Standard (Executive Order S-01-07)</u> | <u>Establishes protocols for measuring life-cycle carbon intensity of transportation fuels and helps to establish use of alternative fuels.</u>   | <b>Consistent.</b> The Project would be consistent with this regulation and would not conflict with implementation of the transportation fuel standards by including electric vehicle supply equipment, which will allow charging stations to be supplied based on demand. |
| <u>Advanced Clean Cars Program</u>                        | <u>In 2012, CARB adopted the Advanced Clean Cars (ACC) program to reduce criteria pollutants and GHG emissions for model year vehicles 2015 through 2025. ACC includes the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.</u> | <b>Consistent.</b> The Project would be consistent with this regulation and would not conflict with implementation of the transportation fuel standards by including electric vehicle supply equipment, which will allow charging stations to be supplied based on demand. |

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TABLE 4.6-3 CONSISTENCY WITH APPLICABLE STATE GREENHOUSE GAS REDUCTION STRATEGIES

| <u>Sector/Source</u>    | <u>Category Description</u>  | <u>Consistency Analysis</u>  |
|-------------------------|--|--|
| <u>SB 375</u>           | SB 375 establishes mechanisms for the development of regional targets for <u>reducing passenger vehicle GHG emissions</u> . Under SB 375, CARB is required, in <u>consultation with the state's Metropolitan Planning Organizations</u> , to set regional <u>GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035</u> . | <b>Consistent.</b> Table 2 demonstrates the Project's consistency with SB 375 through its consistency with the <u>2015 Regional Transportation Plan for Shasta County as established by Shasta Regional Transportation Agency (SRTA)</u> . Table 2 also describes the Project's relevant transportation related mitigation measures.   |
| <b>Water</b>            |  |  |
| <u>CCR, Title 24</u>    | Title 24 includes water efficiency <u>requirements for new residential and non-residential uses</u> .  | <b>Consistent.</b> The Project would meet this requirement as part of its <u>compliance with the 2016 CalGreen Building Standards Code</u>   |
| <u>Senate Bill X7-7</u> | The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by <u>December 31, 2020</u> . Each urban retail water supplier shall <u>develop water use targets to meet this goal</u> .   | <b>Consistent.</b> The Project was designed in accordance with the <u>2016 CalGreen Building Standards Code</u> , which includes water conservation measures. The City of Redding Water Utility would be able to supply the demands of the project. In addition, the City of Redding Water Utility met its goal to reduce per capital water usage by 10% by 2015 and is implementing additional water conservation measures (e.g., water conservation pricing, outreach, water saving devices) as part of its <u>2015 Urban Water Management Plan to meet its goal of reducing per capita urban water use by 20% by 2020</u> . |

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TABLE 4.6-3 CONSISTENCY WITH APPLICABLE STATE GREENHOUSE GAS REDUCTION STRATEGIES

| Sector/Source   | Category Description  | Consistency Analysis   |
|---|---|--|
| <b>Solid Waste</b>  |   |  |
| California Integrated Waste Management Act (IWMA) of 1989 and Assembly Bill (AB) 341. | The IWMA mandated that state agencies develop and implement an integrated waste management plan which outlines the steps to be taken to divert at least 50 percent of their solid waste from disposal facilities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75 percent disposal reduction by the year 2020. | <b>Consistent.</b> The Project will institute a recycling and composting program and will be serviced by the Solid Waste Utility.  |
| <b>Other Sources</b>  |   |  |
| Climate Action Team   | Reduce diesel-fueled commercial motor vehicle idling.   | <b>Consistent.</b> The Project's mitigation measures would be consistent with the CARB Air Toxics Control Measure to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time.   |
|   | Achieve California's 50 percent waste diversion mandate (Integrated Waste Management Act of 1989) to reduce GHG emissions associated with virgin material extraction.   | <b>Consistent.</b> The Project would meet this requirement as part of its compliance with the 2016 CalGreen Building Standards Code. The Project will institute a recycling and composting program and will be serviced by the Solid Waste Utility.  |
|   | Plant five million trees in urban areas by 2020 to effect climate change emission reductions.   | <b>Consistent.</b> The Project would provide appropriate landscaping on the Project Site including over 100,000 square feet of drought-tolerant shrubs, grasses, and will plant or retain at least 330 trees in planters in the parking lot, adjacent to the buildings, along adjacent streets, and within a "buffer yard" (a 20-foot-wide vegetated area typically required by the City between commercial and residential land uses) along the north property line of the Project. |

## GREENHOUSE GASES

TABLE 4.6-3 CONSISTENCY WITH APPLICABLE STATE GREENHOUSE GAS REDUCTION STRATEGIES

| <u>Sector/Source</u>                             | <u>Category Description</u>  | <u>Consistency Analysis</u>   |
|--|--|---|
| <u>Climate Action Team</u><br><u>(Continued)</u> | <u>Implement efficient water management practices and incentives, as saving water saves energy and GHG emissions.</u>  | <b>Consistent.</b> The Project would meet this requirement as part of its compliance with the 2016 CalGreen Building Standards Code.  |
|  | <u>Reduce GHG emissions from electricity by reducing energy demand. The California Energy Commission updates appliance energy efficiency standards that apply to electrical devices or equipment sold in California. Recent policies have established specific goals for updating the standards; new standards are currently in development.</u> | <b>Consistent.</b> The Project would utilize energy efficiency appliances and equipment and would meet the energy standards in ASHRAE 90.1-2010 Appendix G, the Title 24, 2019 Building Energy Efficiency Standards, the 2016 CalGreen Building Standards Code, and it will incorporate energy savings measures to reduce any increase in energy demand with the measures listed in the Project description.  |
|  | <u>Apply strategies that integrate transportation and land-use decisions, including but not limited to promoting jobs/housing proximity, high-density residential/commercial development along transit corridors, and implementing intelligent transportation systems.</u>   | <b>Consistent.</b> The Project would comply with state, regional, and local transportation measures. The Project's Specific Plan would be consistent with the City of Redding General Plan policies to coordinate transportation and land-use planning. The Project would establish a commercial center in an appropriate location that maximizes the property's use potential and economic vitality for the community and the region, contributes to job growth in the City of Redding, provides an Interstate 5 (I-5) interchange location within the City of Redding to facilitate the development of a discount warehouse with fuel sales and retail/restaurant uses to serve local and travelling customers, provides for the construction of complementary retail and restaurant uses with shared access and parking, provides access to the commercial |

## GREENHOUSE GASES

TABLE 4.6-3 CONSISTENCY WITH APPLICABLE STATE GREENHOUSE GAS REDUCTION STRATEGIES

| <u>Sector/Source</u>                   | <u>Category Description</u>  | <u>Consistency Analysis</u>  |
|--|--|--|
|  |  | development to existing residents in close proximity on the both sides of Interstate 5 and future development of residentially zoned land north of the Project, and provides access to the Redding Area Bus Authority Route 4 that less than a mile away.  |
| Climate Action Team<br><br>(Continued) | Apply strategies that integrate transportation and land-use decisions, including but not limited to promoting jobs/housing proximity, high-density residential/commercial development along transit corridors, and implementing intelligent transportation systems.<br>(Continued) | Note: most traffic to the discount warehouse is expected to be by single-occupancy vehicle, but the surrounding retail and restaurants that are part of the project may utilize alternative forms of transportation including transit that is already nearby.  |
|  | Reduce energy use in private buildings.  | <b>Consistent.</b> The Project would utilize energy efficiency appliances and equipment and would meet the energy standards in ASHRAE 90.1-2010 Appendix G, the Title 24, 2019 Building Energy Efficiency Standards, the 2016 CalGreen Building Standards Code, and it will incorporate energy savings measures to reduce any increase in energy demand with the measures listed in the Project description. |

### Abbreviations:

AB - Assembly Bill

ACC - Advanced Clean Cars

ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers

CARB - California Air Resources Board

CFC - Code of Federal Regulations

GHG - Greenhouse Gas

HVAC - Heating, Ventilation and Air Conditioning

IMWA - California Integrated Waste Management Act

LEV - Low-Emission Vehicle

PHEV - plug-in hybrid electric vehicles

REU - Redding Electric Utility

SB - Senate Bill

SRTA - Shasta Regional Transportation Agency

SWPPP - Stormwater Pollution Prevention Plan

ZEV - Zero-Emission Vehicle

## GREENHOUSE GASES

Statewide GHG-reducing strategies are greatly reducing GHG emissions. As shown, the proposed Project is consistent with and would not conflict with the applicable GHG-reduction strategies of the State of California.

### Shasta Regional Transportation Association Regional Transportation Plan / Sustainable Communities Plan

The 2018 RTP/SCS embodies a collective vision for the region's future and is developed with input from local governments, including the City of Redding. The RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035 and establishes an overall GHG target for the region consistent with both the statewide GHG-reduction targets for 2020 and the post-2020 statewide GHG reduction goals. The 2018 RTP/SCS is a long-range visioning plan to encourage and promote the safe and efficient management, operation, and development of a regional intermodal transportation system that, when linked with appropriate land use planning, will serve the mobility needs of goods and people. Future investments seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding. In addition, the RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve state GHG emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently. The proposed Project's consistency with the RTP/SCS goals is analyzed in detail in Table 4.6-4.

**TABLE 4.6-4 CONSISTENCY WITH APPLICABLE SRTA RTP/SCS ACTIONS AND STRATEGIES**

| <u>Goals</u>   | <u>Objectives</u>  | <u>Consistency Analysis</u>  |
|--|--|--|
| <b><u>Shasta Regional Transportation Association (SRTA) Regional Transportation Plan (RTP)</u></b>   |  |  |
| <u>1. Optimize the use of existing interregional and regionally significant roadways to prolong functionality and maximize return-on-investment.</u> | <u>Proactively maintain interregional and regionally significant roadways in a manner that balances cost and facility lifecycle.</u> | <b><u>N/A.</u></b> <u>The Project does not relate to the maintenance of interregional and regionally significant roadways.</u> |

**GREENHOUSE GASES**

**TABLE 4.6-4 CONSISTENCY WITH APPLICABLE SRTA RTP/SCS ACTIONS AND STRATEGIES**

| <u>Goals</u>  | <u>Objectives</u>  | <u>Consistency Analysis</u>  |
|---|--|--|
|   | <u>Increase the throughput of people and freight on interregional and regionally significant roadways.</u> | <b>Consistent.</b> The Project would comply with <u>state, regional, and local transportation measures. The Project's Specific Plan would be consistent with the City of Redding General Plan policies to ensure interagency and regional coordination with regard to transportation planning and improvements. The Project would establish a commercial center in an appropriate location that serves the demands of the community and the region by providing an Interstate 5 (I-5) interchange location within the City of Redding to facilitate the development of a discount warehouse with fuel sales and retail/restaurant uses to serve local and travelling customers and include a series of transportation mitigation measures to assist with the reduction of emissions from single-occupancy vehicle trips (e.g., installation of electric vehicle supply equipment, increased pedestrian sidewalks, bicycle lanes, designated carpool/rideshare parking, and access to the Redding Area Bus Authority Route 4 that less than a mile away). Note: most traffic to the discount warehouse is expected to be by single-occupancy vehicle, but the surrounding retail and restaurants that are part of the project may utilize alternative forms of transportation including transit that is already nearby.</u> |
| <u>2. Strategically increase capacity on interregional and regionally significant roadways to keep people and freight moving effectively and efficiently.</u> | <u>Maximize funding available for transportation and mobility improvements in the region.</u>              | <b>Consistent.</b> The Project would comply with <u>state, regional, and local transportation measures. To meet the City of Redding's level of service (LOS) standards, the Traffic Impact Analysis identified necessary off-site improvements to address impacts of the proposed Project either as mitigation, or through payment of traffic impact fees through the City's Development Impact Fees program. The relevant improvements to</u>   |
|   | <u>Maintain adequate traffic capacity on the core interregional network</u>                                |  |

## GREENHOUSE GASES

TABLE 4.6-4 CONSISTENCY WITH APPLICABLE SRTA RTP/SCS ACTIONS AND STRATEGIES

| Goals   | Objectives   | Consistency Analysis  |
|---|--|---|
|   |  | <p>interregional transportation are as follows:</p> <ul style="list-style-type: none"> <li>• Adding additional lanes on I-5</li> <li>• Adding additional turn lanes to I-5 overcrossing</li> </ul> <p>In addition, With the project mitigation measures TRANS 1.2 and TRANS 1.3, the project would not conflict with level of service standards established by the county congestion management agency for designated roads or highways.</p>  |
| 3. Provide an integrated, context-appropriate range of practical transportation choices.                | Develop an integrated, context-appropriate range of local transportation choices.                        | <p><b>Consistent.</b> The Project would comply with state, regional, and local transportation measures. The Project's Specific Plan would be consistent with the City of Redding General Plan policies to promote multi-modal transportation options. The Project would establish a commercial center in an appropriate location that serves the demands of the community and the region by providing an Interstate 5 (I-5) interchange location within the City of Redding to facilitate the development of a discount warehouse with fuel sales and retail/restaurant uses to serve local and travelling customers, increasing pedestrian sidewalks and bicycle lanes and including access to Redding Area Bus Authority Route 4 that is less than a mile away. Note: most traffic to the discount warehouse will be by single-occupancy vehicle, but the surrounding retail and restaurants that are part of the project may utilize alternative forms of transportation including transit that is already nearby.</p> |
| 3. Provide an integrated, context-appropriate range of practical transportation choices.<br>(Continued) | Develop an integrated, context-appropriate range of interregional transportation choices.<br>(Continued) | <p><b>Consistent.</b> The Project would comply with state, regional, and local transportation measures. To meet the City of Redding's level of service (LOS) standards, the Traffic Impact Analysis identified necessary off-site improvements to address impacts of the proposed Project either as mitigation or through payment of traffic impact fees</p>  |



**GREENHOUSE GASES**

**TABLE 4.6-4 CONSISTENCY WITH APPLICABLE SRTA RTP/SCS ACTIONS AND STRATEGIES**

| <u>Goals</u>  | <u>Objectives</u>  | <u>Consistency Analysis</u>  |
|---|--|--|
|   |  | through the City's Development Impact Fees program.  |
| <b><u>Shasta Regional Transportation Association (SRTA) Regional Transportation Plan (RTP) (Continued)</u></b>        |  |  |
| <u>3. Provide an integrated, context-appropriate range of practical transportation choices.</u><br><u>(Continued)</u> | <u>Develop an integrated, context-appropriate range of interregional transportation choices.</u><br><u>(Continued)</u> | The relevant improvements to interregional transportation are as follows:<br><ul style="list-style-type: none"> <li>• <u>Adding additional lanes on I-5 ramps</u></li> <li>• <u>Adding additional turn lanes to I-5 overcrossing</u></li> </ul> <u>In addition, with the project mitigation measures TRANS 1.2 and TRANS 1.3, the project would not conflict with level of service standards established by the county congestion management agency for designated roads or highways.</u>  |
| <u>4. Create vibrant, people-centered communities.</u>  | <u>Support local governments in implementing the Sustainable Communities Strategy</u>                                  | <b><u>Consistent.</u></b> The Project would comply with state, regional, and local transportation measures. The Project's Specific Plan would be consistent with the City of Redding General Plan policies to provide "Complete Streets." The Project would establish a commercial center in an appropriate location that maximizes the property's use potential and economic vitality for the community and the region, contributes to job growth in the City of Redding, facilitates the development of a discount warehouse with fuel sales and retail/restaurant uses to serve local and travelling customers. |
| <u>4. Create vibrant, people-centered communities.</u><br><u>(Continued)</u>  | <u>Enhance community health, safety, and well-being.</u>   | The Project would establish a commercial center in an appropriate location that provides for the construction of complementary retail and restaurant uses with shared access and parking, provides access to the commercial development to existing residents in close proximity on the both sides of Interstate 5 and future development of residentially zoned land north of the Project, and includes a series of measures to enhance health, safety, and well-being through the reduction of emissions from single-occupancy vehicle trips   |

## GREENHOUSE GASES

TABLE 4.6-4 CONSISTENCY WITH APPLICABLE SRTA RTP/SCS ACTIONS AND STRATEGIES

| Goals  | Objectives  | Consistency Analysis   |
|--|---|--|
|  |   | (e.g., installation of electric vehicle supply equipment, increased pedestrian sidewalks, bicycle lanes, designated carpool/rideshare parking, and access to Redding Area Bus Authority Route 4 that less than a mile away). Note: most traffic to the discount warehouse will be by single-occupancy vehicle, but the surrounding retail and restaurants that are part of the project may utilize alternative forms of transportation including transit that is already nearby.   |
| 5. Strengthen regional economic competitiveness for long-term prosperity.                  | Facilitate sustainable economic development programs and projects.                      | <b>Consistent.</b> The Project would comply with state, regional, and local transportation measures. The Project's Specific Plan would be consistent with the City of Redding General Plan policies to ensure interagency and regional coordination with regard to transportation planning and improvements. The Project would establish a commercial center in an appropriate location that maximizes the property's use potential and economic vitality to serve the demands of the community and the region by contributing to job growth in the City of Redding. |
| 5. Strengthen regional economic competitiveness for long-term prosperity. (Continued)      | Resolve transportation related barriers to increased economic activity and productivity | The project would facilitate the development of a discount warehouse with fuel sales and retail/restaurant uses to serve local and travelling customers and providing for the construction of complementary retail and restaurant uses with shared access and parking. The Project would also include a series of traffic-related mitigation measures to assist with the integration of transportation and land-use.   |
| 6. Promote public access, awareness, and action in planning and decision-making processes. | Utilize a broad range of public participation involvement strategies                    | <b>Consistent.</b> The Project would comply with state, regional, and local transportation measures. Project's off-site improvements are identified in the Traffic Impact Analysis as  |

**GREENHOUSE GASES**

**TABLE 4.6-4 CONSISTENCY WITH APPLICABLE SRTA RTP/SCS ACTIONS AND STRATEGIES**

| <u>Goals</u>  | <u>Objectives</u>   | <u>Consistency Analysis</u>   |
|---|---|---|
|   | <u>Provide meaningful opportunities for the public to participate in regional planning and decision-making.</u>   | <u>necessary to address impacts of the proposed Project either by implementing physical improvements, or through payment of traffic impact fees through the City's Development Impact Fees program. Additionally, the preparation of an EIR goes through a public process with a public comment period so the general public can participate in the decision-making process.</u>              |
| <u>7. Practice and promote environmental and natural resource stewardship.</u>  | <u>Identify and minimize the direct and indirect adverse impacts of transportation on the environment, including but not limited to: climate change, air quality, healthy watersheds, and essential wildlife habitat.</u> | <b>Consistent.</b> <u>The Project would comply with state, regional, and local transportation measures. Project's off-site improvements are identified in the Traffic Impact Analysis as necessary to address impacts of the proposed Project either by implementing physical improvements, or through payment of traffic impact fees through the City's Development Impact Fees program.</u> |
| <u>7. Practice and promote environmental and natural resource stewardship.</u><br><i>(Continued)</i>  | <u>Lead the development of resilient transportation systems and services in the face of increasing environmental change and societal shifts in mobility.</u>  | <b>Consistent.</b> <u>The Project would comply with state, regional, and local transportation measures. Project's off-site improvements are identified in the Traffic Impact Analysis as necessary to address impacts of the proposed Project either by implementing physical improvements, or through payment of traffic impact fees through the City's Development Impact Fees program.</u> |
| <b><u>Sustainable Community Strategies (SCS): GHG</u></b>   |   |   |
| <u>Expanded plug-in electric vehicle charging infrastructure, including fast charging stations needed to accelerate the market penetration of zero-emission electric vehicles</u>   |   | <b>Consistent.</b> <u>The Project would install at least 90 clean air vehicles parking spaces, including 68 stalls for electric vehicle supply equipment, to meet the 2016 CalGreen requirements.</u>   |
| <u>Expansion of interregional public transportation options, with a focus on replacing long-distance interregional vehicle trips to airports and other large-urban destination.</u> |   | <b>Consistent.</b> <u>The Project would also include access to public transportation that is already nearby. Project's off-site improvements are identified in the Traffic Impact Analysis as necessary to address impacts of the proposed Project either by implementing physical improvements, or through payment of traffic impact fees through the City's Development</u>                 |

## GREENHOUSE GASES

TABLE 4.6-4 CONSISTENCY WITH APPLICABLE SRTA RTP/SCS ACTIONS AND STRATEGIES

| Goals  | Objectives | Consistency Analysis  |
|--|------------|---|
|  |            | Impact Fees program.  |
| Consolidated goods and freight hub, including capital infrastructure investments needed to support the aggregation, wholesale, and distribution of agricultural commodities, natural resources, and other key industries in Shasta County and the North State. |            | <b>N/A.</b> The Project does not include consolidated goods and freight.  |
| Expanded bicycle and pedestrian infrastructure, including the completion of network gaps, enhanced integration with public transportation, and connections between regional trail corridors and the roadway network.   |            | <b>Consistent.</b> The Project would comply with state, regional, and local transportation measures. The Project's Specific Plan would be consistent with the City of Redding General Plan policies to provide safe, efficient, and comfortable routes for walking, bicycling, and public transportation to increase use of these modes of transportation, enable a convenient and active travel as part of daily activities, and meet the needs of all users of the streets. The Project would establish a commercial center in an appropriate location that serves the demands of the community and the region by providing an Interstate 5 (I-5) interchange location within the City of Redding to facilitate the development of a discount warehouse with fuel sales and retail/restaurant uses to serve local and travelling customers, increasing pedestrian sidewalks and bicycle lanes connected to existing residences in close proximity on both sides of Interstate 5 and future development of residentially zoned land north of the Project and including access the Redding Area Bus Authority Route 4 that less than a mile away. Note: most traffic to the discount warehouse will be by single-occupancy vehicle, but the surrounding retail and restaurants that are part of the project may utilize alternative forms of transportation including transit that is already nearby. |

## GREENHOUSE GASES

**TABLE 4.6-4**      **CONSISTENCY WITH APPLICABLE SRTA RTP/SCS ACTIONS AND STRATEGIES**

| <u>Goals</u>   | <u>Objectives</u> | <u>Consistency Analysis</u>  |
|--|-------------------|--|
| Incentives for infill and redevelopment projects, needed to spur location-efficient development patterns.  |                   | <u>N/A.</u> The Project is not an infill or redevelopment project in the context of the SCS.   |
| Technology-based strategies, including intelligent transportation systems (ITS) applications designed to enhance traffic operations and provide real-time travel information to system users |                   | <u>Consistent.</u> The Project would comply with state, regional, and local transportation measures. The Project would also include a series of traffic-related mitigation measures to assist with the integration of transportation and land-use. |

**Abbreviations:**

GHG - Greenhouse Gas

N/A - not applicable

SCS - Sustainable Community

Strategies

SRTA - Shasta Regional Transportation Agency

RTP - Regional Transportation Plan

Implementing SRTA's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emission reduction targets. As shown, the proposed Project would be consistent with and would not conflict with the stated goals of the RTP/SCS; therefore, the proposed Project would not interfere with SRTA's ability to achieve the region's year 2020 and post-2020 mobile source GHG reduction targets outlined in the 2018 RTP/SCS, and it can be assumed that regional mobile emissions will decrease in line with the goals of the RTP/SCS.

### Draft Shasta Regional Climate Action Plan

In 2010, the SCAQMD initiated the regional climate action planning (RCAP) process. The primary objectives of the RCAP process are to contribute to the State's climate protection efforts and to provide CEQA review streamlining benefits for development projects in the region's four jurisdictions. The Draft RCAP establishes a community-wide emissions reduction target of 15 percent below 2008 levels by 2020, following guidance from CARB and the Governor's Office of Planning and Research. CARB and the California Attorney General have determined this approach to be consistent with the statewide AB 32 goal of reducing emissions to 1990 levels by the year 2020. Progress toward achieving the 2020 emissions reduction target will be monitored over time through progress indicators, where possible. The Draft RCAP progress indicators provide mid-course checks to evaluate if a measure is on the right path to achieving targeted GHG reductions.

## GREENHOUSE GASES

To meet emissions reduction targets, the Draft RCAP relies on a combination of statewide actions and local emissions reduction efforts. As previously described, statewide emissions reduction programs have been developed to implement AB 32. These statewide actions provide the majority of reductions under the Draft RCAP. Local reduction measures and actions are included to address the remaining gap between the reduction targets and statewide actions. These draft local actions are organized into reduction categories according to the source of emissions that they address. Reduction categories include energy, solid waste, transportation, water, and carbon sequestration. While the Draft RCAP has not yet been adopted, the proposed Project's consistency with the RCAP is analyzed in detail in **Tables 4.6-5 and 4.6-6** for informational purposes.

**Table 4.6-5 Consistency with Applicable Draft Shasta Regional Climate Action Plan GHG Measures**

| Measure                            | Actions and Indicators  | Consistency Analysis   |
|------------------------------------|---|--|
| <b>Focus Area: Building Energy</b> |   |  |
| BE-1 Existing Buildings            | <p>Actions: Promote PG&amp;E incentives and energy conservation programs for older homes and develop comprehensive public outreach campaign promoting energy-efficiency improvements.</p> <p>Indicators: 10% of existing non-residential buildings implement energy efficiency retrofits by 2020 and 22.5% of existing non-residential buildings implement energy efficiency retrofits by 2035.</p>         | <b>N/A.</b> The Project will not include existing buildings.   |
| BE-2 New Construction              | <p>Action: Develop a priority permitting program for new residential projects that demonstrate 15% higher efficiency than Title 24 requirements.</p> <p>Indicators: 50% of non-residential construction achieves 25% reduction in energy use above 2008 Title 24 by 2020 and 75% of non-residential construction achieves 25% reduction in energy use above 2008 Title 24 by 2035.</p>                      | <b>Consistent.</b> The Project would meet the requirements of the 2019 Title 24, which result in a 60% reduction in energy use compared to 2008 Title 24.  |
| BE-3 Commercial Indoor Lighting    | <p>Action: Discuss applicable rebates and incentive programs with building developers during the building permit phase and provided targeted outreach to building owners/managers of large non-residential buildings.</p> <p>Indicators: 10% of non-residential buildings reduce indoor lighting load by 40% by 2020 and 22.5% of non-residential buildings reduce indoor lighting load by 40% by 2035.</p> | <b>Consistent.</b> Project buildings would include energy-saving lighting such as highly efficient LED lighting and outdoor lamps and an energy management system with sensors/timers to reduce lighting load. |
| BE-4 Energy-Efficient Appliances   | <p>Action: Collaborate with PG&amp;E to promote existing financial incentives programs to encourage voluntary</p>   | <b>Consistent.</b> The Project would be required to comply with Title 24   |

**GREENHOUSE GASES**

**Table 4.6-5 Consistency with Applicable Draft Shasta Regional Climate Action Plan GHG Measures**

| <b>Measure</b>              | <b>Actions and Indicators</b>   | <b>Consistency Analysis</b>   |
|-----------------------------|---|---|
|                             | <p>replacement of inefficient appliances with new ENERGY STAR appliances and Advertise energy-efficient appliance rebates at community events.</p> <p>Indicators: New homes install ENERGY STAR appliances at the following rates: 40% refrigerators, 40% clothes washers, and 70% dishwashers and Existing homes replace ENERGY STAR appliances at the following rates: 20% refrigerators, 20% clothes washers, and 20% dishwashers by 2020. New homes install ENERGY STAR appliances at the following rates: 90% refrigerators, 90% clothes washers, and 90% dishwashers and Existing homes replace ENERGY STAR appliances at the following rates: 90% refrigerators, 90% clothes washers, and 90% dishwashers by 2035.</p> | <p>building energy efficiency standards, which establish minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of the Title 24 standards significantly reduces energy usage.</p>  |
| BE-5 Smart Grid Integration | <p>Action: Develop an outreach program with PG&amp;E that informs businesses about smart grid and smart appliance technologies, as well as energy conservation opportunities using smart meter technology.</p> <p>Indicators: 10% of existing commercial customers adopt smart-grid technology by 2020, 30% of new commercial customers adopt smart-grid technology by 2020, 22.5% of existing commercial customers adopt smart-grid technology by 2035 and 67.5% of new commercial customers adopt smart-grid technology by 2035.</p>  | <p><b>Consistent.</b> The Project would implement the following smart-meter/smart-appliance technologies:</p> <ul style="list-style-type: none"> <li>• HVAC comfort systems controlled by a computerized building management system to maximize efficiency.</li> <li>• Photo sensor and time clock-controlled parking lot and exterior lights.</li> <li>• Lighting is controlled by the overall Project energy management system.</li> <li>• The use of variable speed motors make-up air units and booster pumps.</li> </ul> |
| BE-6 Solar Water Heaters    | <p>Action: Work with PG&amp;E and California Solar Initiative to develop an outreach program to maximize installation of solar hot water systems in commercial buildings, Encourage the use of California Solar Initiative, US EPA, PG&amp;E, and other rebates for solar hot water heaters, Streamline permitting (e.g., building, electric, plumbing) for solar hot water system installation, and Reduce or waive fees associated with installation of solar water heaters.</p> <p>Indicators: 5% of nonresidential buildings install a solar hot water system by 2020 and 11.3% of nonresidential buildings install a solar hot water</p>   | <p><b>N/A.</b> This measure only calls for 5% of nonresidential buildings install a solar hot water system by 2020 and 11.3% by 2035. It is not mandatory for nonresidential buildings.</p>   |

## GREENHOUSE GASES

Table 4.6-5 Consistency with Applicable Draft Shasta Regional Climate Action Plan GHG Measures

| Measure                          | Actions and Indicators  | Consistency Analysis   |
|----------------------------------|---|--|
|                                  | <u>system by 2035.</u>  |  |
| <u>BE-7 Photovoltaic Systems</u> | <p><u>Action: Remove regulatory barriers to installation of PV systems, provide streamlined permitting and reduce permitting fees related to installation of PV systems, and Develop public outreach campaign that explains benefits of PV systems, highlights available rebates/incentives, explains PPAs and identifies solar service providers in the area.</u></p> <p><u>Indicators: County government installs 6.5 MW of solar power by 2020 and 15 MW of solar power by 2035.</u></p> | <p><b><u>N/A.</u></b> The measure pertains to <u>removing regulatory barriers to installation of PV systems and public outreach.</u></p> |



**GREENHOUSE GASES**

**Table 4.6-5 Consistency with Applicable Draft Shasta Regional Climate Action Plan GHG Measures**

| <u>Measure</u>  | <u>Actions and Indicators</u>   | <u>Consistency Analysis</u>   |
|---|---|---|
| <b>Focus Area: Water</b>                              |   |   |
| <u>W-1: Residential Fixture and Fittings Retrofit</u> | <p><u>Action: Develop informational materials that describe benefits of installing high-efficiency water fixtures/appliances and Identify water efficiency rebates or incentives applicable to unincorporated Shasta County residents.</u></p> <p><u>Indicators: 5% of residential households install high-efficiency toilets, showerheads, faucets, dishwashers, and clothes washers by 2020. 11.3% of residential households install high-efficiency toilets, showerheads, faucets, dishwashers, and clothes washers by 2035.</u></p> | <u>N/A. The Project does not include residential buildings.</u>   |
| <b>Focus Area: Solid Waste</b>                        |   |   |
| <u>SW-1 Lumber Waste Diversion Ordinance</u>          | <p><u>Action: Adopt 75% lumber diversion ordinance applicable to commercial construction and renovation projects</u></p> <p><u>Indicators: 100% of commercial projects participate in 75% lumber waste diversion by 2020 and 2035.</u></p>  | <u>Consistent. The discount warehouse would use pre-manufactured building components to minimize waste during construction. The project would also recycle and salvage for reuse at least 65% of nonhazardous construction debris as part of its compliance with the 2016 CalGreen Building Standards Code.</u> |
| <u>SW-2 Methane Recovery</u>                          | <p><u>Action: Complete installation of methane capture facilities at West Central Landfill and Evaluate future proposals for construction of landfill energy-to-gas system at West Central Landfill</u></p> <p><u>Indicators: Methane recovery efficiency at West Central Landfill improved from 0% to 75% by 2020. Methane recovery efficiency at West Central Landfill continued at 75% by 2035.</u></p>  | <u>N/A. The Project does not include a landfill.</u>  |

## GREENHOUSE GASES

Table 4.6-5 Consistency with Applicable Draft Shasta Regional Climate Action Plan GHG Measures

| Measure                                 | Actions and Indicators   | Consistency Analysis   |
|---|--|--|
| <b>Focus Area: Transportation</b>       |  |  |
| <u>T-1 Bicycle Lane Expansion</u>       | <p>Action: Pursue funding to implement Bicycle Transportation Plan; construct proposed bicycle paths and Discuss benefits of providing end-of-trip facilities at large employment centers with project developers.</p> <p>Indicators: 43 miles of bicycle paths constructed by 2020 and 97 miles of bicycle paths constructed by 2035.</p>   | <b>Consistent.</b> The Project would construct a new 6-foot-wide Class II bicycle facility on the northerly side of South Bonnyview Road and the easterly side of Bechelli Lane along the Project frontage.  |
| <u>T-2 Commute Trip Reduction</u>       | <p>Action: Develop a ride-matching website, identify transit stops in high-activity areas that would benefit from additional enhancements (e.g., shelter, seating, electronic arrival/departure information), and Pursue funding for transit stop improvements.</p> <p>Indicators: 5% of employees in unincorporated Shasta County commute via carpool or public transit by 2020 and 2035.</p> | <b>Consistent.</b> The Project would install designated carpool/rideshare parking. Note: most traffic to the discount warehouse will be by single-occupancy vehicle, but the surrounding retail and restaurants that are part of the project may utilize alternative forms of transportation including transit that is already nearby. |
| <b>Focus Area: Carbon Sequestration</b> |  |  |
| <u>GI-1 Urban Forest</u>                | <p>Action: Work with PG&amp;E to advertise the benefits of planting shade trees around buildings and parking lots.</p> <p>Indicators: 400 shade trees are planted by 2020 and 900 shade trees are planted by 2035.</p>   | <b>Consistent.</b> The landscape plan includes a variety of shade trees that would be used throughout the parking field and along the Project perimeter and that are appropriate for the climate in Redding.   |

**Abbreviations:**

CAP - Climate Action Plan

GHG - Greenhouse Gas

HVAC - Heating, Ventilation and Air Conditioning

LED - Light-emitting diode

N/A - not applicable

PG&E - Pacific Gas & Electric

PV - Photovoltaic

USEPA - United States Environmental Protection Agency

## GREENHOUSE GASES

**TABLE 4.6-6 CONSISTENCY WITH APPLICABLE DRAFT CAP GREENHOUSE GAS EMISSION REDUCTION MEASURES  
APPLICABLE TO THE CITY OF REDDING**

| Measure                                 | Actions and Indicators  | Consistency Analysis   |
|---|---|--|
| <b>Focus Area: Building Energy</b>      |   |  |
| <u>BE-1 Energy Efficiency Retrofits</u> | <p><u>Actions: Continue to promote and improve utility incentives for energy conservation programs for existing homes and buildings (Redding Electric Utility).</u></p> <p><u>Indicators: Contractors embrace program; customers move forward with projects by 2020 and large commercial customers implement custom energy and demand savings projects by 2035.</u></p>                     | <u>N/A. The Project will not include existing buildings.</u>   |
| <u>BE-2 New Construction</u>            | <p><u>Action: Continue to offer incentives to commercial customers that install energy demand saving/shifting technology and Consider expanding Home Performance Program to new residential construction (Redding Electric Utility).</u></p> <p><u>Indicators: All new construction to achieve 25% reduction in energy use above 2008 Title 24 energy efficiency standards by 2020.</u></p> | <u>Consistent. The Project would meet the requirements of the 2019 Title 24, which result in a 60% reduction in energy use compared to 2008 Title 24.</u>  |
| <u>BE-3 Energy Management Systems</u>   | <p><u>Action: Continue to encourage web-based electric load profiling tool and thermal energy storage (TES) system installation (Redding Electric Utility).</u></p> <p><u>Indicators: TES systems continue to be installed by 2020.</u></p>   | <u>N/A. This measure applies to the Redding Electric Utility.</u>  |
| <u>BE-4 Photovoltaic Systems</u>        | <p><u>Action: Review City regulations, ordinances, and codes to identify and remove, when appropriate, any barriers to solar PV system installation (Development Services Department) and continue to encourage customers to install solar PV systems (Redding Electric Utility).</u></p> <p><u>Indicators: Solar PV systems continue to be installed by 2020.</u></p>                      | <u>Consistent. The Project would meet Title 24's requirement to be solar ready with the warehouse which would be structurally ready for future solar PV. In addition, 1 year after the warehouse is open, the owner will determine if installing solar PV is feasible.</u> |
| <u>BE-5 Building Shade Trees</u>        | <p><u>Action: Continue existing tree planting requirements.</u></p> <p><u>Indicators: 3,800 shade trees are planted by 2020.</u></p>  | <u>Consistent. The landscape plan includes a variety of shade trees that would be used throughout the parking field and along the Project perimeter and that are appropriate for the climate in Redding.</u>   |

## GREENHOUSE GASES

**TABLE 4.6-6 CONSISTENCY WITH APPLICABLE DRAFT CAP GREENHOUSE GAS EMISSION REDUCTION MEASURES  
APPLICABLE TO THE CITY OF REDDING**

| <u>Measure</u>                 | <u>Actions and Indicators</u>   | <u>Consistency Analysis</u>                          |
|--------------------------------|---|--|
| <b>Focus Area: Solid Waste</b> |   |  |
| SW-1 Methane Recovery          | <u>Action: Consult with County staff to verify the installed methane capture system at the West Central Landfill achieves the estimated 75% control efficiency.</u><br><u>Indicators: Methane recovery efficiency at West Central Landfill improved from 0% to 75% by 2020.</u> | <u>N/A. The Project does not include a landfill.</u> |

**GREENHOUSE GASES**

**TABLE 4.6-6 CONSISTENCY WITH APPLICABLE DRAFT CAP GREENHOUSE GAS EMISSION REDUCTION MEASURES  
APPLICABLE TO THE CITY OF REDDING**

| Measure                           | Actions and Indicators  | Consistency Analysis   |
|-----------------------------------|---|--|
| <b>Focus Area: Transportation</b> |   |  |
| T-1 Mixed Use Development         | <p>Action: Create streamlined permitting process for higher density and mixed-use developments and coordinate bicycle and pedestrian infrastructure improvements with planning for mixed-use, transit-oriented developments to ensure infrastructure improvements target higher density areas first to maximize trip reduction benefits.</p> <p>Indicators: 5% of all new residential units are constructed in mixed-use development by 2020.</p> | <p><u>N/A. This measure is directed at City consideration of future projects, and while the Project does not include residential land use, the Project's Specific Plan would be consistent with the City of Redding General Plan to coordinate transportation and land-use planning. The Project would establish a commercial center in an appropriate location that maximizes the property's use potential and economic vitality for the community and the region, contributes to job growth in the City of Redding, provides an Interstate 5 (I-5) interchange location within the City of Redding to facilitate the development of a discount warehouse and retail/restaurant uses with fuel sales to serve local and travelling customers, provides for the construction of complementary retail and restaurant uses with shared access and parking, provides access to the commercial development to existing residents in close proximity on both sides of Interstate 5 and future development of residentially zoned land north of the Project, and provides access to the Redding Area Bus Authority Route 4 that less than a mile away. Note: most traffic to the discount warehouse is expected to be by single-occupancy vehicle, but the surrounding retail and restaurants that are part of the project may utilize alternative forms of transportation including transit that is already nearby.</u></p> |

## GREENHOUSE GASES

**TABLE 4.6-6 CONSISTENCY WITH APPLICABLE DRAFT CAP GREENHOUSE GAS EMISSION REDUCTION MEASURES  
APPLICABLE TO THE CITY OF REDDING**

| <u>Measure</u>                                | <u>Actions and Indicators</u>  | <u>Consistency Analysis</u>  |
|---|--|--|
| <u>T-2 Bicycle Infrastructure</u>             | <u>Action: Continue to pursue grant funding opportunities to implement the Bikeway Action Plan in the Short-Term and Update Bikeway Action Plan to increase bicycle infrastructure expansion goals, with a focus on connecting activity centers (e.g., school campuses, shopping areas, job centers) with residential neighborhoods in the Medium-Term.</u><br><u>Indicators: 96.4 new miles of Class I and II bicycles lanes constructed by 2020.</u> | <u><b>Consistent.</b> The Project would construct a new 6-foot-wide Class II bicycle facility on the northerly side of South Bonnyview Road and the easterly side of Bechelli Lane along the Project frontage.</u> |
| <u>T-3 Pedestrian Network</u>                 | <u>Action: Information not provided</u><br><u>Indicators: Information not provided</u>   | <u><b>Consistent.</b> Pedestrian connection will be provided to accommodate the future residential development to the north to provide direct access to the proposed Project.</u>                                  |
| <u>T-4 Service and Maintenance Efficiency</u> | <u>Action: Use GIS mapping to reduce VMT associated with service calls and Implement substation modernization such as through the installation of microwave radios to reduce maintenance service VMT (Redding Electric Utility).</u><br><u>Indicators: Reduce service call and maintenance VMT annually by 2020.</u>   | <u><b>N/A.</b> This measure applies to the Redding Electric Utility.</u>   |

### Abbreviations:

CAP - Climate Action Plan

GHG - Greenhouse Gas

N/A - not applicable

REU - Redding Electric Utility

TES - thermal energy storage

VMT - vehicle miles traveled

## **Assembly Bill 32**

~~AB 32 codifies the state's GHG emissions reduction targets for 2020. CARB's 2008 Scoping Plan and 2014 First Update outline a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. Some reductions would need to come in the form of changes to vehicle emissions and mileage standards. Some would come from changes to sources of electricity and increased energy~~

GREENHOUSE GASES

~~efficiency at existing facilities. The remainder would need to come from state and local plans, policies, or regulations that will lower carbon emissions from BAU conditions.~~

~~As discussed in Impact GHG-2, estimated 2020 operational emissions would not exceed the average efficiency metric threshold of 4.5 MT CO<sub>2</sub>e/SP, which is derived from the AB 32 reduction target for 2020 (see Table 4.6-4). Accordingly, GHG emissions associated with the Project would not conflict with AB 32.~~

~~As shown in Table 4.6-4, the proposed Project would not impede progress toward the reduction targets of AB 32 in 2020, and the Project's cumulative contribution of GHG emissions in 2020 would be less than significant. As shown in Table 4.6-6, the proposed Project would not impede progress toward the post-2020 reduction targets of SB 32 and EO S-03-05. The Project's cumulative contribution of GHG emissions in the post-2020 scenario would be less than significant.~~

~~Compliance with such thresholds will be part of the solution to the cumulative GHG emissions problem and would not hinder the State's ability to meet its goals of reduced statewide GHG emissions. Therefore, the proposed Project would not conflict with AB 32, SB 32, or EO S-03-05, and the impact is less than significant.~~

~~The Project would be consistent with, and not conflict with, the applicable policies of the RCAP overall (Table 4.6-5), and with the policies in the Draft RCAP specifically drafted for the City of Redding (Table 4.6-6). The proposed Project would be required to adhere to all applicable City regulations, and no aspects of the Project would inhibit RCAP measures.~~

City of Redding General Plan

The City of Redding General Plan serves as a long-term policy guide for physical, economic, and environmental growth. The General Plan contains several policy provisions that reduce GHG emissions associated with land use development. The proposed Project's consistency with the GHG-reducing policy provisions of the Redding General Plan is analyzed in detail in Table 4.6-7.

Table 4.6-7      Consistency with Applicable City of Redding General Plan Elements

| <u>Action</u>                     | <u>Consistency Analysis</u> | <u>Document<br/>Name/Section/ Page<br/>Number</u> |
|-----------------------------------|-----------------------------|---|
| <u>Focus Area: Transportation</u> |                             |   |

## GREENHOUSE GASES

**Table 4.6-7 Consistency with Applicable City of Redding General Plan Elements**

| <u>Action</u>   | <u>Consistency Analysis</u>   | <u>Document Name/Section/ Page Number</u>   |
|---|---|---|
| <p>Revise the City's current Construction Standards to incorporate:</p> <ul style="list-style-type: none"> <li>* <u>Desired design features for arterials, including landscape strips between the curb and sidewalk, Class II bicycle lanes, and landscaped medians. Transitions between standard sidewalk layouts and the new designs should also be addressed. (Policy T3A)</u></li> <li>* <u>Standards for the full range of potential bicycle and pedestrian facilities expected to be developed within the City. (Policy T6A, T8A)</u></li> <li>* <u>Criteria for Planning Commission and/or City Engineer approval of exceptions to standard street dedication and improvement requirements.</u></li> </ul> | <p><b>Consistent.</b> <u>The Project would increase pedestrian sidewalks and bicycle lanes.</u></p>   | <p><u>General Plan Implementation/ Transportation/ Page 4</u></p>   |
| <p><u>Prepare and implement a Comprehensive Bikeway Plan to specifically locate, prioritize, and identify funding sources for commuter and recreational bicycle facilities. (Pol. T8A)</u></p>  | <p><b>Consistent.</b> <u>Project would construct a new 6-foot-wide Class II bicycle facility on the northerly side of South Bonnyview Road along the Project frontage.</u></p>  | <p><u>General Plan Implementation/ Transportation/ Page 4</u></p>   |
| <p><u>Streets should be designed to maximize pedestrian access to transit stops.</u></p>  | <p><b>Consistent.</b> <u>The Project would increase pedestrian sidewalks. No new transit is expected, but there is a Redding Area Bus Authority Route 4 that less than a mile away. Note: most traffic to the discount warehouse will be by single-occupancy vehicle, but the surrounding retail and restaurants that are part of the project may utilize alternative forms of transportation including transit that is already nearby.</u></p> | <p><u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 27</u></p> |
| <p><u>Large residential, commercial, and industrial projects should include bus shelters at transit access points.</u></p>  | <p><b>N/A.</b> <u>No new transit is expected as a result of this Project; current transit is less than one mile away. There is a bus stop that provides transit access via the Redding Area Bus Authority Route 4 that less than a mile away, but a bus shelter is not available. Note: most traffic to the discount warehouse will be by single-occupancy vehicle, but the</u></p>   | <p><u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 27</u></p> |



**GREENHOUSE GASES**

**Table 4.6-7 Consistency with Applicable City of Redding General Plan Elements**

| <u>Action</u>   | <u>Consistency Analysis</u>  | <u>Document Name/Section/ Page Number</u>  |
|---|--|--|
|   | <u>surrounding retail and restaurants that are part of the project may utilize alternative forms of transportation including transit that is already nearby.</u>   |  |
| <u>Provide temporary traffic control as appropriate during all phases of construction to improve traffic flow (e.g., flag person).</u>                              | <b>Consistent.</b> <u>The construction contractor will manage traffic as needed during the construction phase.</u>   | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 27</u> |
| <u>Schedule construction activities that affect traffic flow to off-peak hours.</u>   | <b>Consistent.</b> <u>The Project would schedule construction activities that affect traffic flow to off-peak hours where it is determined that traffic flow would be unreasonably affected by peak-hour construction.</u>   | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 27</u> |
| <u>Contribute to traffic-flow improvements that are not growth-inducing (e.g., right-of-way, capital improvements, etc.).</u>                                       | <b>Consistent.</b> <u>The proposed Project would comply with state, regional, and local transportation measures. The Project would also include a series of traffic-related mitigation measures to assist with the integration of transportation and land-use, such as providing an Interstate 5 (I-5) interchange location within the City of Redding to facilitate the development of a discount warehouse with fuel sales and retail/restaurant uses to serve local and travelling customers.</u> | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 28</u> |
| <u>Provide preferential parking spaces for carpools and vanpools and provide 7-foot 2-inch minimum vertical clearance in parking facilities for vanpool access.</u> | <b>Consistent.</b> <u>The Project would also include a series of transportation mitigation measures to assist with the reduction of emissions from single-occupancy vehicle trips (e.g., installation of electric vehicle supply equipment, increased pedestrian sidewalks, bicycle lanes, designated carpool/rideshare parking, and access to public transportation that is already nearby).</u>  | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29</u> |

## GREENHOUSE GASES

**Table 4.6-7 Consistency with Applicable City of Redding General Plan Elements**

| <u>Action</u>   | <u>Consistency Analysis</u>   | <u>Document Name/Section/ Page Number</u>  |
|---|---|--|
| <u>Telecommuting programs, alternate work schedules, and guaranteed ride home programs shall be established as appropriate.</u>                               | <u>N/A. These programs would not be applicable to employees of a club discount warehouse and retail stores and restaurants.</u>   | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29</u> |
| <u>Provide for transit-use incentives such as subsidized transit passes and accommodation of unusual work schedules to encourage transit use.</u>             | <u>N/A. These programs would not be applicable to employees of a club discount warehouse and retail stores and restaurants.</u>   | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29</u> |
| <u>Convert fleet vehicles to clean-burning fuel as appropriate.</u>   | <u>Consistent. All trucks that travel to/from the Project will be required to comply with the California Air Resources Board's On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation. The conversion to alternative fueled vehicles can be used to meet the requirements of this regulation.</u>   | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29</u> |
| <u>Shower/locker facilities shall be provided when appropriate for bicycling and pedestrian commuters.</u>  | <u>N/A. These facilities would not be applicable to employees of a club discount warehouse and retail stores and restaurants. However, the Project includes measures to encourage commuting alternatives such as installation of electric vehicle supply equipment, increased pedestrian sidewalks, bicycle lanes, designated carpool/rideshare parking, and access to public transportation provided by the Redding Area Bus Authority Route 4 that less than a mile away. In addition, the Transportation and Traffic Analysis does not require the Project to include a TDM.</u> | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29</u> |
| <u>Construct off-site bicycle and pedestrian facility improvements such as trails linking the facility to designated pedestrian/bicycle commuting routes.</u> | <u>Consistent. The Project would increase pedestrian sidewalks and bicycle lanes.</u>   | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29</u> |
| <u>Provide on-site services such as cafeterias, food vending machines,</u>  | <u>Consistent. The Project will include a food court in the Costco Warehouse.</u>   | <u>Air Quality Element/ VI. Air Quality Analysis</u>   |

**GREENHOUSE GASES**

**Table 4.6-7 Consistency with Applicable City of Redding General Plan Elements**

| <u>Action</u>  | <u>Consistency Analysis</u>   | <u>Document Name/Section/ Page Number</u>   |
|--|---|---|
| automatic tellers, etc., as appropriate.   |   | and Best Available Mitigation Measures/ Page 29   |
| Contribute to construction of off-site park-n-ride lots  | <u>N/A.</u> The Project's off-site improvements are identified in the Traffic Impact Analysis as necessary to address impacts of the proposed Project either as mitigation, or through payment of traffic impact fees through the City's Development Impact Fees program. The Transportation and Traffic Analysis does not require the Project to contribute to the construction of off-site park-n-ride lots.  | Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29 |
| Provide on-site child care and after-school facilities or contribute to off-site development within walking distance.  | <u>N/A.</u> There are four child care centers within two miles of the proposed Project, the nearest being 0.6 miles (Lil Miracles Childcare). A new child care center on-site would not be warranted.   | Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29 |
| Construct on-site pedestrian facility improvements such as walk paths and building access which is physically separated from street and parking lot traffic. | <u>Consistent.</u> The project would add new pedestrian sidewalks and accessible paths of travel from the public streets to project buildings.  | Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29 |
| Implement compressed work-week schedules where weekly work hours are compressed into fewer than five days, such as 9/80, 4/40 or 3/36.                       | <u>N/A.</u> These programs would not be applicable to employees of a club discount warehouse and retail stores and restaurants.   | Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29 |
| Construct on-site and off-site bus turnouts, passenger benches, or shelters  | <u>N/A.</u> No new transit is expected as a result of this Project; current transit is less than one mile away. Nevertheless, there is a bus shelter at the which provides transit access via the Redding Area Bus Authority Route 4 that less than a mile away and bus turnout that is already nearby. Note: most traffic to the discount warehouse will be by single-occupancy vehicle, but the surrounding retail and restaurants that are part of the project | Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29 |

## GREENHOUSE GASES

**Table 4.6-7 Consistency with Applicable City of Redding General Plan Elements**

| <u>Action</u>   | <u>Consistency Analysis</u>   | <u>Document Name/Section/ Page Number</u>  |
|---|---|--|
|   | <u>may utilize alternative forms of transportation including transit that is already nearby.</u>  |  |
| <u>Provide adequate bicycle storage/parking facilities</u>  | <b>Consistent.</b> <u>The Project would meet this requirement as part of its compliance with the 2016 CalGreen Building Standards Code.</u>   | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29</u> |
| <u>Implement alternative transportation program such as Caltrans rideshare.</u>   | <b>Consistent.</b> <u>The Project would install designated carpool/rideshare parking. Note: most traffic to the discount warehouse will be by single-occupancy vehicle, but the surrounding retail and restaurants may utilize alternative forms of transportation including transit that is already nearby.</u>          | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 29</u> |
| <b><u>Focus Area: Energy/GHG</u></b>  |   |  |
| <u>Provide energy-efficient process systems, such as water heaters, furnaces, and boiler units.</u>   | <b>Consistent.</b> <u>The Project would meet the energy standards in ASHRAE 90.1-2010, Appendix G and the Title 24, 2019 Building Energy Efficiency Standards.</u>  | <u>Air Quality Element/ VI. Air Quality Analysis and Best Available Mitigation Measures/ Page 27</u> |
| <u>Policy NR14A. Provide an electric-usage analysis and efficiency recommendations for those customers who request the service.</u>                         | <b>N/A.</b> <u>This initiative pertains to the electric utility, REU.</u>   | <u>Natural Resources Element/ Energy Resources and Conservation/ Page 13</u>                         |
| <u>Policy NR14B. Encourage electric utility customers to alter their consumption of electric power to reduce the City's overall and peak electric load.</u> | <b>Consistent.</b> <u>The Project would utilize energy efficiency appliances and equipment and would meet the energy standards in ASHRAE 90.1- 2010 Appendix G, the Title 24, 2019 Building Energy Efficiency Standards, the 2016 CalGreen Building Standards Code and it will incorporate energy savings measures to</u> | <u>Natural Resources Element/ Energy Resources and Conservation/ Page 13</u>                         |

**GREENHOUSE GASES**

**Table 4.6-7 Consistency with Applicable City of Redding General Plan Elements**

| <u>Action</u>  | <u>Consistency Analysis</u>  | <u>Document Name/Section/ Page Number</u>  |
|--|--|--|
|  | <u>reduce any increase in energy demand with the measures listed in the Project description.</u>   |  |
| <u>Policy NR14C. Explore the commercial viability of extracting natural gas resources within the vicinity of the Redding Municipal Airport.</u>  | <u>N/A. This initiative pertains to the Redding Municipal Airport.</u>   | <u>Natural Resources Element/</u><br><u>Energy Resources and Conservation/</u><br><u>Page 13</u> |
| <u>Policy NR14D. Continue current source-reduction, recycling, and composting programs that are contained in the joint County of Shasta, City of Redding, and City of Anderson Source Reduction and Recycling Element.</u> | <u>Consistent. The Project will institute a recycling and composting program and will be serviced by the Solid Waste Utility.</u>  | <u>Natural Resources Element/</u><br><u>Energy Resources and Conservation/</u><br><u>Page 13</u> |
| <u>Policy NR14E. Encourage design that takes advantage of solar orientation and access.</u>  | <u>Consistent. The Project would also meet the applicable requirements from the 2016 CalGreen Building Standards Code related to energy efficiency and conservation.</u> | <u>Natural Resources Element/</u><br><u>Energy Resources and Conservation/</u><br><u>Page 13</u> |

## GREENHOUSE GASES

**Table 4.6-7 Consistency with Applicable City of Redding General Plan Elements**

| <u>Action</u>  | <u>Consistency Analysis</u>   | <u>Document Name/Section/ Page Number</u>  |
|--|---|--|
| <b>Focus Area: Water</b>   |   |  |
| <p><u>Goal NR3: Preserve and protect the quantity and quality of groundwater resources within the planning area.</u></p> <p><u>-Policy NR3A. Provide maximum groundwater-recharge opportunities by maintaining the natural condition of waterways and floodplains to the extent feasible, given flood-control requirements.</u></p> <p><u>-Policy NR3B. Comply with the Regional Water Quality Control Board's regulations and standards to maintain and improve groundwater quality in the Planning Area.</u></p> <p><u>-Policy NR3C. Support the preparation of a groundwater management plan for the Redding Groundwater Basin that will address long- term sustainability of the resource.</u></p> <p><u>-Policy NR3D. Support efforts to prevent exportation of groundwater to other areas of the state and to retain local control over the resource.</u></p> <p><u>-Policy NR3E. Work with appropriate state, federal, and local agencies to protect, improve, and enhance groundwater quality in the region.</u></p> | <p><b>Consistent.</b> <u>The Project water demands would not deplete groundwater supplies due to the recharge from the Project's stormwater infiltration system. Note: future projects may have cumulative effects that would be mitigated through adherence with applicable permits.</u></p> | <p><u>Natural Resources Element/</u></p> <p><u>Stormwater Management/</u></p> <p><u>Groundwater Recharge/</u></p> <p><u>Page 4</u></p> |

**GREENHOUSE GASES**

**Table 4.6-7 Consistency with Applicable City of Redding General Plan Elements**

| <u>Action</u>  | <u>Consistency Analysis</u>  | <u>Document Name/Section/ Page Number</u>  |
|--|--|--|
| <b><u>Focus Area: Waste</u></b>  |  |  |
| <p><u>GOAL PF8. Provide for efficient collection and disposal of solid waste while maintaining an adequate waste disposal capacity.</u></p> <p><u>-Policy PF8A. Establish the following thresholds for solid waste collection and disposal facilities:</u></p> <p><u>+Pursue expansion of the City's solid waste transfer station when collection activities approach 85 percent of facility capacity or additional space is needed to accommodate desired separation and recycling activities</u></p> <p><u>-Policy PF8B. Continue to require solid waste collection service for residential, commercial and industrial uses within the incorporated area.</u></p> <p><u>-Policy PF8C. Continue to implement the City's Source Reduction and Recycling Element and expand identified programs, when feasible, in order to meet or exceed state mandated waste diversion goals.</u></p> <p><u>-Policy PF8D. Promote recycling and other measures designed to reduce the generation of solid waste.</u></p> <p><u>-Policy PF8E. Continue to work cooperatively with Shasta County to address regional issues related to solid waste disposal and waste reduction.</u></p> | <p><b><u>Consistent.</u></b> The Project will institute a <u>recycling and composting program and will be serviced by the Solid Waste Utility.</u></p> | <p><u>Public Facilities and Services Element/</u></p> <p><u>Solid Waste Collection and Disposal/</u></p> <p><u>Pages 8-9</u></p> |

**Abbreviations:**

ASHRAE - American Society of Heating, Refrigerating and

Air-Conditioning Engineers

GHG - Greenhouse Gas

N/A - not applicable

## GREENHOUSE GASES

As shown in Table 4.6-7, the Project would be consistent with, and would not conflict with, the applicable GHG-reducing policy provisions of the Redding General Plan.

Greenhouse gas emissions generated by the Project would not have a significant impact on global climate the Project would be consistent with, and would not conflict with, the greenhouse gas reduction plans and policies governing the region.

**Significance Without Mitigation:** Less than significant.

### ~~4.6.44.6.3~~ CUMULATIVE IMPACTS

---

|               |  |
|---------------|--|
| <b>GHG-42</b> | <b>Greenhouse gas emissions generated by the Project would not have a significant impact on global climate change. [Less Than Significant]</b> |
|---------------|--|

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Under AB 32 and SB 32, CARB has been tasked with adopting regulations for reduction of GHG emissions. The effects of this Project are evaluated based not upon the quantity of emissions, but rather on whether the Project implements reduction strategies identified in AB 32, SB 32, the Governor's Executive Order S-3-05, or other strategies to help reduce GHGs to the level proposed by the governor. If so, it could reasonably follow that the Project would not result in a significant contribution to the cumulative impact of global climate change.

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are exclusively cumulative impacts. The additive effect of Project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the proposed Project as well as other cumulative related projects would be subject to all applicable regulatory requirements, which would further reduce GHG emissions. As shown in ~~Table~~ Tables 4.6-3 through 4.6-6, the proposed Project would implement and not impede the applicable GHG-reduction strategies established to ensure progress toward the statewide reduction targets of AB 32 in 2020, and the Project's cumulative contribution of GHG emissions in 2020 would be less than significant. As shown in Table 4.6-6, the proposed Project would not impede progress toward the reduction targets of SB 32 and EO S-03-05 beyond 2020, and the Project's cumulative contribution of GHG emissions in the post-2020 scenario would be less than significant. Therefore, the Project's cumulative GHG impacts would also be less than significant.

**Significance Without Mitigation:** Less than significant.